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PROPOSED CHAIR OF PUBLIC HEALTH.

DR. THOMAS G. NASMYTH, medical officer of health for the counties of Fife and Clackmannan, contributes to the October number of the *Edinburgh Medical Journal*, an article on "The Medical Officer of Health—Past, Present, and Future." Much has been done, but a great deal remains to be done. One thing pre-eminently remains undone, and that is the founding of a Chair specially devoted to State Medicine and public health: and until this is done education in these subjects will remain as at present, in a chaotic condition. The medical student at the present times acquires the modicum of knowledge required of him regarding preventive medicine by attending about twenty lectures in connection with the class of Medical Jurisprudence, and if he wishes to further specialise his knowledge of this subject he has to wander very much after his own will amongst half-a-dozen subjects scattered over the medical science and arts courses. With the institution of a regular independent Chair of public health, a systematic course could be sketched out, embracing all the subjects required of the student who wishes to qualify himself for the public health service. After referring to the high standard of proficiency required by the different examining boards granting diplomas or degrees in sanitary science or public health, Dr. Nasmyth proceeds to deal with the future. The public health service, he states, has undoubtedly attracted the attention of a large and increasing number of medical men within the past twenty years. In 1871 four qualified in public health; in 1881, 22; in 1891 over 150. There are various reasons why there should be this increasing number. There is, first of all, the increasing number of appointments open for competition by men holding public health qualifications, by the establishment of Scottish and English Local Government Boards, and by the Burgh Police

Act for Scotland demanding that medical officers of health must be qualified in public health after 1892. Another reason, and one which demands approbation, is the desire for medical men to more fully qualify themselves for practice by acquiring knowledge of the preventive rather than the curative side of medicine. Twenty years ago one heard very little of hygienic medicine. Nowadays hygienic foods and clothing are as much vaunted as homœopathic pilules. This is a very encouraging sign of the times, as it indicates that individuals are beginning to realise that preventive medicine is a reality, and that a great many diseases and ailments are amenable to sanitary influences. Dr. Nasmyth proceeds to consider how far the education and training of the modern medical officer of health adapt him for the duties he has to perform. In conclusion, he says that the position of the medical officer meantime is most encouraging, and the recent appointment of one to share in the supervision and administration of sanitary matters in Scotland is a well-merited honour to the medical profession, and an acknowledgment of their right, in common with their legal brethren, to share in the government of the country. The sanitary well-being of individuals and communities is a matter of State concern, and it behoves the State to stimulate research in the domains of chemistry and pathology specially directed to the aims of preventive medicine. This could be done by endowing State laboratories and giving endowments for private research.

THE "FADS" AND THE FALLACIES OF SHOWS.

BY W. G. S.

It will be generally admitted that the stimulus of competition encouraged by the various societies in connection with animal shows has been the means of greatly improving the different breeds: one would not require to trace back the English race-horse, or the American trotter many generations before observing marked improvement both in appearance and speed, but while this is the case, the attention of societies and judges might be profitably drawn to useless, hurtful, and pernicious practices which are permitted in shows and, in some cases, to count as points in favour. No doubt improvements have begun in the right direction, but much still remains to be done: man is naturally a conservative animal and slow to adopt improvements. "I have always been accustomed to do it that way," is a common argument against

adopting an obviously better and cheaper method; the English ploughman, while admitting that bearing reins are of no use in ploughing, continues to use them because he has "always been accustomed to them."

When dog-fighting was a popular sport in England, the bull terrier had his ears cropped and we continued the practice without thinking, although we know that it produces deafness. Nature gave the animal the flap of the ear as a protection when down, and to increase the collecting power of sounds when raised and man might know that he will have, as Biglow says, "to get up early," if he wants to take in nature.

Generally speaking, the faults or fallacies in judging are, when the judge forgets or ignores the purpose for which the animal is used.

A few years ago, the black-and-tan collie put other coloured brethren in the shade: his star faded, however, and that of the black and white usurped the place, and he, in turn, had to resign in favour of the sable, promoted.

While the black-and-tan was in favour it was well known that breeders crossed with the Gordon setter to get what was considered a good tan; and little reflection is needed to understand the pernicious effects of a collie, with his instinct divided between game and sheep.

A good collie is one of the most sagacious of the lower animals, but at present brain is being bred out of them to satisfy the "fad" of judges.

A gamekeeper or a shepherd will say that he likes a dog with low set ears, which is another way of saying that he likes room for brains above the ear; and yet, if one looks round a dog-show, he will find the honours given to those with least brain—a dog which would be worse than useless to a shepherd. The large round-headed collie is easily trained to work the sheep quietly, while the tendency of the ideal prize dog, with his greyhound-like thin nose and flat head, would be to see how quickly he could do the work, admitting that he could be trained to do anything. Chest, no doubt, is necessary, and "feather" is an ornament; but the primary object we have in keeping a collie should not be lost sight of, nor the means to that object systematically reduced.

One would think that it would be unnecessary to tell a ten-year old boy that sheep are used for food and clothing, that the market value is for mutton and wool; and yet it would seem necessary to remind judges at agricultural

shows of this primary and simple fact, and that they give undue favourable weight to matters of little or no importance, and in some cases to points of admitted detriment.

In black-faced sheep, a few years ago, favour was given to the one with what was then considered a good "brock," *i.e.*, to one with a white blaze between the black forehead and nose; now, given other points equal, the prize would be awarded to one with a completely black face, although it is admitted that where this is the case there is a great tendency to having black wool in the body, a point to avoid. Then, again, before a tup or ewe is sent to the show, the shepherd carefully cuts off all the wool between the eyes and horns, while he will at the same time admit that a fulness of wool on the forehead indicates a well-clad body.

With short-woolled sheep, the use of ochre or chrome to tint the wool should be prohibited, as should all artificial measures or means which are obviously meant to deceive the judge or to make the animal look better than it really is.

A fashion has recently crept on of curling the hair of Clydesdale horses for the show-yard, though it seems to be impossible to find out for what purpose. At a recent show several of the men in charge of the various horses were asked the purpose of the curling, and not one knew, and only one could give a suggestion, which was, that if a horse had a deficiency such as flatness of rib, the curling would fill up and deceive the judge. This was said without reserve, as if in shows deception was quite legitimate and common, with the inference that judges are easily imposed upon. Here, again, it should be decreed that curling is prohibited as being unnatural, and if for any purpose, that of deception.

The Hackney is made to stand as if he were about to perform a *lex naturæ*, and means are adopted to make him carry his tail what is considered "well," which might be worth the attention of the Society for the Prevention of Cruelty to Animals.

No doubt, the hackney's trained style of standing may make him look smart, but if it is sauce for the hackney goose, why not adopt it for the hunter gander? The cow was for long a martyr to one of the evils of shows. It is well known, that in order to show a good "milker," the teats were waxed up and the milk allowed to accumulate for a considerable time before the show, a practice which must have caused intense suffering. This cruelty has been put a stop to, but there is another to which the attention of judges and the above-named society might be drawn.

The breeders of the Ayrshire cow have recently discovered that nature has placed the horns of that bovine at a wrong angle, that they should be perpendicular instead of horizontal, and for the attainment of this object the calf has a rope attached to the horns, the rope going through a pulley and having a weight attached to the other end, and it is not an unknown experience for the calf to wrench a horn off in its attempts to free itself from the torture.

It may be asked "How can the judges prevent the practice?" No doubt it is first the duty of the Society alluded to, but the judges can also show that they have no preference for the angle of the horn unless it be in favour of the angle decided on by nature.

The clipping of the hair close, from the head to the shoulder, should also not be allowed, and it might all the sooner, if the judges could be brought to look on it as a reflection on their capabilities of judging. In short, whatever gives unnecessary pain, whatever is unnatural or detrimental should be considered a disqualification, and shows would be freed from phases of cruelty and absurdity.

REMOVAL OF LIPOMATOUS TUMOURS FROM THE EYES.

BY THE EDITOR.

CHESTNUT roadster stallion, four years old, admitted to the College infirmary on October 2nd. Symptoms: A tumour in each eye, situated between the membrana nictitans and surface of cornea, filling up the lachrymal fossæ, pushing the eyeballs upwards and the membrana nictitans outwards and upwards, larger part of the eyes hidden by the tumours and membrana below and by the upper eyelids above.

On examination, the eyes having been first dressed with cocaine solution, it was found that each tumour was adherent to the inner surface of the membrana nictitans, from margin to base, but presented a free surface towards the cornea.

By carefully dissecting the mass from the membrane with a fine scalpel, its base was cut with a pair of probe-pointed scissors and the whole removed, leaving the membrana nictitans intact. The near side eye was operated on first. There was a little more difficulty with the other eye there being two masses to remove; however, with a little patience, this was accomplished; the eyes were then dressed with an antiseptic lotion, the horse placed on a cooling diet and for the first four days the eyes were bathed and dressed. The inflammation

having then subsided the horse was left alone and is now perfectly well, the eyes presenting no appearance whatever of the tumours or of the operation. The horse was not cast.

On examination the troubles were found to consist of fat contained in a slightly vascular sac. Tumours, in this region, are not uncommon in the dog, but so far as my experience goes, are very rare indeed in the horse.

RUPTURED SPLEEN.

BY MR. T. BOWLAS, NEW VETERINARY COLLEGE.

WHILE assisting Mr. Craik, M.R.C.V.S., of Alnwick, I was called on August 20th last, to see a bay four-year old gelding. The animal had done its usual day's work, that of running in a milk-cart, but had refused its evening meal. On my reaching the farm, I found the cob in a stall, its head was carried very low; it seemed propped up on its four legs, it leaned forward a good deal, once or twice while I was watching, it swayed forward, and fell up against the manger; the shock seemingly brought it to consciousness again. The pulse was thready, and could not be counted, but was a very rapid one. The legs and ears were deathly cold, the mucous membranes of eye, nose and mouth absolutely white. The breathing was accelerated and shallow. There was no sweating. Feeling sure that I had a case of internal hæmorrhage to deal with, and one likely to have a fatal ending, I told the owner my prognosis. Taking the animal from the stall, we placed him in a box, and tried to administer a draught of liq. ferri perchl. and ergot. On lifting up the head, the animal appeared to swoon, and fell coming very nearly on the top of his doctors. The draught was given as he lay on the floor. On inserting my hand into the rectum, the bladder was found to be greatly distended with urine. I passed the catheter, and withdrew a large quanity of what appeared to be normal urine.

My patient was now sweating profusely, the mouth was opened at each inspiration. He died in a few hours.

Post-mortem 18 hours after.—On opening the abdominal cavity, a very large quantity of serosity escaped, and great masses of blood clots were found. The spleen had a big clot attached to its surface. On removing this, the capsule of the spleen was found to be lacerated, and a wide rugged fissure led down into the splenic pulp. The other organs were, to all appearances, quite healthy. I may say that the cob had been starved before his owner bought it (some months before), but since coming into his hands, it had been very well fed.

EVERSION OF UTERUS AND VAGINA.

BY A. J. MACDONALD.

WHILE at home during the summer vacation I was called one morning in July to see a mare belonging to Mr. Kelly, Kildorrery. On arrival I found the animal lying at the bottom of a narrow glen beside a stream. The mare was on her left side and three men were sitting on her head to keep her down. Having relieved the unfortunate patient from her human burden, I noted that she was sweating a good deal and straining almost incessantly. A large rounded tumour occupied the position of the vulva which I soon discovered to be the everted vagina, it was œdematous, very greatly swollen and inflamed. After having bathed it well I smeared it with vaseline, and with a good deal of difficulty managed to return it. Inserting my hand I found the two fore-feet of the foal in the passage, but no head was obtainable. A cord was now put on each fore-leg and traction used. On again inserting my hand and arm I found the head at the pelvic brim, pushing the two legs back the head was brought into line, and on further traction the foal slipped out bringing however along with it the uterus and vagina.

The mare was now so utterly exhausted that I had seriou thoughts of having her destroyed. At the request of the owner I proceeded to reduce the prolapsus. Having stripped the membranes from the uterus, and having washed and greased the sides of the organ, I suspended it on a sack held by two men and gently pushing in the sides of the viscus succeeded after a little while by pushing on the fundus with my closed fist to return the whole mass. After washing out the cavity with Condy's fluid and water I inserted two sutures into the labia. This was all done while the mare lay on her side; she was now utterly unable to get up, there was no straining and indeed very little signs of life. A stimulant was given and the animal propped on her side, covered with sacks and left. On going down about six hours afterwards, instead of finding the mare dead as I expected, I discovered her in the stable eating a mash. The after treatment consisted in applying carbolic oil to the vagina, there was very little discharge and not much swelling, the stitches were removed in four days, and a perfect recovery resulted.

An aged mare, the property of Mr. Fitzgerald, Kildorrery, was turned into a paddock alright at night. The next morning some men going early to a fair, discovered her with a foal at foot, and hanging below her tail a big red tumour the size of a man's head.

I was sent for and, on my arrival, found the mare standing

in a loose box, very much excited, straining almost continuously, while a man was pressing a cloth against the vulval region to prevent further protrusion. I soon found that what I had to deal with was the everted vagina. It was much darker in colour, and seemed more friable than in the former case, so that I had to use great caution in dealing with it. To prevent the straining which frustrated all my attempts to return the vagina, I put a twitch on the mare's nose, and another round the belly (by using a doubled rope and a stick), and gave one ounce of chloral dissolved in a pint of water. This quietened the animal, and I proceeded, as in my former case, to reduce the everted organ. Stitches were placed through the vulva and anodyne draughts given, and the parts were dressed with carbolic oil. Strange to say, this case, although much less serious than the other one, had not nearly so satisfactory a termination. There was great swelling, a good deal of discharge, and much constitutional disturbance, and it was nearly a fortnight before the mare was herself again.

THE SIXTH INTERNATIONAL VETERINARY CONGRESS, HELD AT BERN (SWITZERLAND), SEPTEMBER, 1895.

WE abridge the following report from the *Berliner Thierärztliche Wochenschrift*:—This congress was well attended by surgeons from all parts of the world. The central position of Switzerland and the attractions of its mountain scenery contributed doubtless to the success of the meeting. As many as 680 surgeons had intimated their intention of being present, and amongst these, apart from a great number of Swiss Surgeons, were 77 from Germany, 55 from France, 24 from Belgium, Austria-Hungary 19, Russia 12, Holland 12, Italy 11, England 4, Denmark, Sweden, Norway, Luxemburg, Spain, Portugal, India, Japan, Egypt, Greece, Bulgaria and America announced one or two each, and Roumania as many as 64, but only about a third of these, or a little more, were present at the meeting. Amongst the outstanding names we may mention Messrs. Chauveau, Nocard, Cornevin and Trasbot from France; Schmaltz, Siedamgrotzky and Müller from Germany; Schindelka and Aloys Koch from Austria; Ranpach from Russia; Bang from Denmark; Cope, MacFadyean and Fleming from England; Lanzilloti-Buonsanti from Italy; Nogueira from Portugal, and Pilavios from Greece.

As the great majority of the members present spoke either French or German, the business of the meeting was con-

ducted in these languages, but every utterance was at once rendered by a translator into the other language—French or German, as the case might be. This mode of operation is in use in the Swiss Parliament where both German and French-speaking members take part in the debates. The translation was done dexterously, and no one who could speak either language had any difficulty in following the discussions. The first meeting, which had rather a holiday aspect, was opened by Colonel Potterat, chief of the Swiss Veterinary Department, and president of the Committee of Management, who spoke in French. Thereafter Dr. Deucher, the representative of the Swiss Federal Government, addressed the meeting in German, welcoming the members to Switzerland in the name of the Government, and assuring them of the profound interest felt by the Government in veterinary affairs and the importance which they attached to the debates that were about to begin. The Congress having been thus formally constituted, Dr. Deucher, with the approbation of the meeting, vacated his chair in favour of M. Chauveau, who opened the scientific deliberations.

The first subject on the programme was "International veterinary police regulations, and how best to frame and work them." This was regarded as a subject of primary importance, and ably written papers by Hutyra (Hungary). Degive (Belgium), Berdez (Switzerland), and Perroncito (Italy), were read, but the meeting seemed to feel that the outlook was almost hopeless, as national jealousy would have to be overcome and the dislike that every country feels to having its affairs exposed to its neighbours' gaze. Then there was the question of frontier and the difficulty of keeping such questions free from political complication. Another point was emphasized by Dr. von Ranpach, who said that if, for instance, rinderpest prevailed in the Caucasus, it would be monstrous to proclaim the whole of Russia, with its enormous territory, an infected district. Dr. von Ranpach stated the interesting fact that European Russia had lost, even so late as 1885, some 700,000 head of cattle by rinderpest, and that now these losses, thanks to the measures taken for stamping out the disease, had been reduced to 2,000 a year. In the Baltic provinces no case of rinderpest had occurred since 1861, and the disease might be said to be rooted out in European Russia except in the Caucasus. In the discussion Mr. Cope took part, declaring that the English plan of total stoppage of transit was the best protection against infection. An inclination was shown by the meeting to confine its action to a petition which should be sent to the various

Governments suggesting the appointment of an international conference on Infectious Diseases, but M. Hutyra objected that the congress was itself the best conference and would get no farther forward by making such petitions. At length the following motions were carried without opposition, viz., (*a*) that an international service be established for reporting on infectious diseases and that an international bulletin for cattle-disease be published; (*b*) that a petition be presented to the Swiss Government, suggesting that it take the initiative in calling an international conference for the purpose of establishing a code of regulations for the transit of cattle.

The second meeting took place on 17th September, and dealt with the important question of mallein. Papers were read by Nocard, Schindelka, and Foth, and a lively discussion ensued; the experiences given in detail by the various speakers indicated the importance which surgeons in every country attach to the new treatment. M. Nocard led the party of the out-and-out supporters of mallein, and seemed to have with him the great bulk of his countrymen on this question. He went so far as to say that the question had been practically settled by his experiments. Foth, on the other hand, drew attention to the failures, which he thought worthy of attention. The Russian surgeons gave their experiences, from which it appeared that the use of mallein in that country—at any rate, as at present prepared—gives sometimes unsatisfactory results. Dr. Müller took the opposite view to M. Nocard, and made a not ineffectual attack on mallein, bluntly contesting its importance and supporting his arguments by statistics from Prussia. A motion was proposed by Nocard to the effect that (*a*) mallein is a powerful agent in settling the diagnosis of glanders when that disease is suspected; (*b*) the systematic administration of mallein in the case of stock affected with glanders, is the best means of stamping out the disease. After a good deal of opposition this was carried by 49 votes to 39. A resolution was then proposed by Foth, and supported by Chauveau, Leblanc, Arloing, and Müller; it was unanimously adopted by the meeting along with Nocard's motion. It was as follows: "The Governments of Europe are respectfully solicited to place means at the disposal of veterinary surgeons whereby the value of mallein injections may be finally and effectually settled. For this purpose, and to prevent all disputes, it is desirable that a number of horses be provided which shall be artificially infected with glanders, and treated with mallein." It is, indeed, highly desirable that Governments everywhere should make earnest efforts for the settlement of this

vexed question, so important to the veterinary profession and to stock owners; and this can only or best be done at official instigation and under official supervision. It is not to be expected that we shall reach absolute certainty —that would be something new in medicine—but we might at any rate, expect to get at the cause of those vexatious, failures, real or apparent, which persistently accompany the much more numerous cases of indisputable success. Much might be done with State help towards the production of pure mallein by comparing the various sorts and otherwise; the supporters of mallein can wish for nothing better than that investigation should go on, that a fair field and no favour be given to their specific.

The afternoon of the 17th was taken up with a discussion on Tuberculin. The first speaker was Professor Bang, of Copenhagen, who advocated its use, and he was opposed by Hess and Guillebean, who were sceptical, and emphasised the danger of aggravating the tuberculous symptoms and the possibility of producing miliary tuberculosis. After much discussion a resolution, proposed by Bang and seconded by Nocard, was adopted. It ran as follows: Tuberculin is a most valuable diagnostic, and may render the greatest service in the struggle against tuberculosis; there is no reason to fear an aggravation of the disease by its use, and therefore no reason to warn practitioners against its general use. A motion by Nocard was carried by 73 votes to 25, and ran as follows: The Congress expresses the wish that governments would order the administration of tuberculin in the case of herds in which tuberculosis has obtained a footing.

The third meeting took place on the 18th September under the presidency of Dr. von Raupach (Russia). The first subject was protective inoculation against "Rauschbrand," but little interest was felt in the matter and no proper discussion took place. The congress had not time to receive communications on erysipelas (red-fire) in swine and the parasites of hæmoglobinuria in sheep, promised by members. A discussion took place on swine-plagues but the decision was referred to a future sitting.

The meeting of 19th September was under the presidency of Professor Hutyra. The subject of swine-diseases was taken up again and the following motion was adopted: (*a*) The two diseases, swine plague and swine-fever ought for practical purposes to be ranked, under one name, amongst diseases to be dealt with by the state; all outbreaks of either ought to be advertised, and they ought to be distinguished in official bulletins from erysipelas due to bacillus; (*b*) The

best means of combating them must be left to the decision of the various countries, as much depends on the laws of the particular country and on local circumstances.

Veterinary-Surgeon Lorenz, of Darmstadt, then read a paper on protective inoculation against erysipelas, and after a discussion the following resolution was adopted: (*a*) Protective inoculation is an indispensable means of combating this disease; (*b*) the congress therefore directs the attention of governments to inoculation and recommends them to support efforts to introduce it, and likewise to supervise the operation and prepare statistics of the cases. Next followed a paper on rabies and inoculation therefor, but it excited very little interest and the attendance grew very thin. The reader of the paper carried a motion which was to the effect that the congress recommended all interested in experimental investigations to examine the conclusion reached by the author of the paper, and to do all in their power to forward the introduction of inoculation against rabies in the various countries of Europe.

DEATH OF LOUIS PASTEUR.

LOUIS PASTEUR died on Saturday, September 28th. If it were not still true that "the world," even now, "knows little of its greatest men," no one throughout the wide range of European civilisation would be unaffected by the announcement. As things go, Pasteur has not been neglected; it was impossible to neglect him; his investigations meant too much money to too many interests. But if his real service to mankind had been properly estimated, his death would have been recorded with greater display of universal regret than that of a Nelson or a Wellington, a Gladstone or a Bismarck. For the services of a Pasteur are services to the universal world of man, direct, immediate, immeasurable, infinite. There is not a hospital, there is not a home, where European science is at fight with disease and death, in which the contest is not affected by the labours of Pasteur. If the surgeon of to-day can save the limb that he would have had to amputate, if he can save the life which would have had to go, it is in the main due to Pasteur. If the physician can forecast and forestall the progress of the most fatal of those ills that flesh is heir to, it is due in the main to Pasteur. But it is not only in the darker days of life that every man and woman of us is reaping the results of the labours of Pasteur. If any man had only told the silk-growers of Europe how to combat the silkworm disease, he would have won a reputation. If any man

had only taught the bankrupt vine-growers of France and Germany how to re-clothe with untainted vintage the valleys of the Rhine and the hill-sides of Burgundy and Aquitaine, he would have won a reputation. If any man had only solved the hideous age-worn problem of hydrophobia, he would have won a reputation such as few know how to win. If any man had only entered our breweries and told the brewer (as he never knew before) how his beer should be brewed to the profit of himself and his customers, he would have won a reputation. If the man be a benefactor of humanity who makes two blades of grass grow where only one grew before, Pasteur was a manifold benefactor of humanity, and by giving the modern agriculturist a tenfold control of his agricultural operations, ought to have won a reputation among reputations. There is no subtlest corner or cranny of our multiform human life into which the fungus and the bacterium does not find its baneful or its beneficent way, and wherever bacterium or fungus is at work, the methods of the work have been made patent and controllable by the illuminating intellect of Louis Pasteur. When the ploughman whistles as he turns the soil, when the dairy-maid sings as she milks the cow, when the nurse and the mother look pale at each other at the breaking of the dawn that means life or death, wherever, in fact, man meets man, or man meets nature, there the meeting has been modified and ameliorated in the interests of man by this one man of the many reputations, Louis Pasteur. "If men pass away," said Pasteur himself, when he was taking part in the Tercentenary Festival of Edinburgh University, "their works remained"—and no words could be truer of himself. His works remain—like those of the summer sunshine—all-pervading, productive, beneficent; and for the most part, like all great influences, they will become day by day more unrecognisable and unrecordable because they day by day become more effective and diffused. Had Louis Pasteur been able to discover and apply some equitable system of royalties on the monetary value of his discoveries throughout the world, he would have been a millionaire among millionaires, and thrown our Goulds, and Vanderbilts, and Rothschilds into the shade. And if, by a subtler method, he had been able to tax with a scarcely perceptible percentage, the human lives he has saved or prolonged, and to add the increments to his own life, he would not only be with us still, but living as if in him at last the old dream of the inexhaustible Elixir of Life had been realised.

Proceedings of Veterinary Medical Societies, etc.

OPENING OF THE WINTER SESSION OF THE NEW VETERINARY COLLEGE.

THE opening of the New Veterinary College for the winter session took place on Wednesday, October 2nd. Councillor Hay presided, in the unavoidable absence of Bailie Sloan, who had met with an accident. There was a good gathering of students, and a considerable number of ladies, of veterinarians and agriculturists present, including, among others, Captain Appleton, A.V.D.; Captain Fenton, A.V.D.; Captain Stewart, of Westwood; Mr. Hickes, M.R.C.V.S., Market Weighton; Mr. Chambers, M.R.C.V.S., Huddersfield; Mr. Moir, M.R.C.V.S., Portobello; Mr. Spreull, F.R.C.V.S., Dundee; Mr. Bell, M.R.C.V.S., Carlisle; Mr. Clarke, F.R.C.V,S., Coupar-Angus; Mr. Boyd, F.R.C.V.S., Melrose; Messrs. Borthwick, M.R.C.V.S., Kirkliston; Hutton, F.R.C.V.S., Kelso; R. S. Gray, Southfield; Gibson, Torwoodlee; Durkie, M.R.C.V.S., Mill o' Mains, Dundee, etc. The attendance, however, was not so large as in former years, on account of the change in the hour at which the Clyde Street College was opened. In former years the opening ceremony at the Clyde Street College was always held at one o'clock, and that at the New Veterinary College at two o'clock, so that visitors had the opportunity of being present at the opening ceremony at both Colleges. This year, however, the Town Council agreed to have the opening at the College, of which they are trustees, held at two o'clock, and the effect of this innovation was that visitors were unable to be present at both functions as in former years. This appears to be a somewhat ungracious act on the part of Lord Provost M'Donald, who was last year elected Lord Provost of Edinburgh by the casting vote of Councillor Williams, the Principal of the New Veterinary College.

Councillor HAY said he had been called upon at a moment's notice to preside at that meeting in the absence of Bailie Sloan. He was there not only to represent the Edinburgh Town Council, but also for the purpose of testifying to the great respect which he had for his colleague in the Town Council, Councillor Williams. He then called upon Mr. R. Rutherford, F.R.C.V.S., Edinburgh, to deliver the introductory address.

Mr. RUTHERFORD, who was very cordially received, said that in the address he intended to deliver to them he was to confine himself to a retrospective sketch of the veterinary profession during the last forty years :—

Gentlemen,—We are met here to-day to inaugurate another year in the scholastic life of the New Veterinary College, and our friend, Principal Williams, has done me the honour of asking me to say a few words to you in lieu, or by way, of the usual introductory address. I cannot hope to do more, and am somewhat afraid that I too readily consented to do so at all. Once or twice in my life, perhaps oftener, it has fallen to me to address an audience. Generally, however, my hearers have been members of our profession, or others interested in some question affecting the well-being or health of our lower animals, never before of veterinary students, gentlemen who, judging by my occasional experience of them, are always inclined to be much more critical than their seniors. I just hope I may not be punished for my temerity.

The position, gentlemen, which I occupy is one which is usually, and I venture to think, would be more appropriately filled by a member of the college staff, who generally, in the particular branch of your studies of which he has the direction, has an abundance of new and interesting material at hand, out of which he has no difficulty in framing what is usually an interesting lecture. I am not in that position, and must confess that for the last few

weeks I have been somewhat puzzled as to what I should say, without wearying those of you who are not here for the first time, and yet possibly interest those who are. Thinking over the matter, it constantly occurred to me that you commence the study of your profession under circumstances and with advantages so superior to those which pertained when I myself first joined, that probably a sketchy retrospect of what the veterinary profession and veterinary teaching was in Scotland say 35 to 45 years ago, as compared with the present time, might not prove uninstructive. I do not myself quite date back to the latter period. What I have to say, therefore, will be only partly from my own recollections, the rest will be from what I have repeatedly heard from gentlemen who studied at that time. As you know, we have at the present time in England and Scotland four teaching institutions, but at the time I speak of there were only two, the one in Camden Town, London, and the Dick College here in Edinburgh. Later we had Professor Gamgee's School, also first established in Edinburgh, but subsequently removed to London, where, after a troubled and not over prosperous career, it terminated its comparatively short existence. In 1860, I think, Principal McCall established the institution which still flourishes under his wise and able guidance in Glasgow, and later still, making it the youngest but by no means the least, we have this institution founded by Principal Williams, founded, I hope, to remain a permanency, under circumstances which I do not think it is necessary for me to refer to to-day, further than to say that the sympathies and good wishes of the profession at large were, and still are, with him in his venture.

That the schools could be doubled, and still thrive as they have done, has, no doubt, been owing to the fact that there has been, as I venture to think there still is, an increasing appreciation by the public of the services rendered by their graduates. But in the early days, the qualified veterinary surgeon did not by any means hold the field. On the contrary, a large amount of the then available practice was in the hands of farriers, and of those who combined the double calling of farrier and blacksmith, many of whom I should just like to say in passing, were men of a very superior intelligence, and for their practical skill and ability in many instances, were much respected by those who sought their services. More, as compared with the flashy empiric, too common even at the present time, they were, I think, a superior, a better informed, and more useful class of men. It was, in my student days, very much the custom of the budding, and too frequently, also, of the already qualified practitioner, to speak of them contemptuously. They were all classed alike, they were said to be ignorant, and their methods were said to be barbarous. Well, perhaps they were, some of them, but although I have recollections of some who were neither, was it not lost sight of that the men themselves were, after all, not so very much to blame, that, in fact, they just represented the condition, may I say the art, of medicine at that time, as applied to the lower animals, and as handed on to them; and that they followed its practice often very successfully, mind you, just according to their light, and as the result, frequently, of close and intelligently applied observation. Still, further, was it not forgotten that posterity, with its always advancing greater knowledge, might possibly have as much to say of their detractors, even, as it may say of us of the present day? Who knows?

To displace and replace these old practitioners with duly qualified ones, was the aim and purpose of the schools, and, no doubt, the desire for this arose from the very praiseworthy feeling or conviction that the time had come when the attendant on a sick animal should possess some qualification, should have had some scientific training akin to that of the gentleman who ministered to the ailments of its owner. I have frequently, however, heard that this was in many instances a very difficult thing to do, and that too frequently it was

an exceedingly uphill job to bring about a recognition of the fact that, all things considered, the college-bred should be superior to the home-bred practitioner, or, in other and plainer words, that in general practice the former was even as good a man as the latter, for you must remember that then, as now, the public could only judge us by our work.

I daresay in some cases, but not so very many, as was said, there was room for some difference of opinion on the subject, and looking back now to some of the education of the time, I do not think that such was very much to be wondered at. I do not wish to alarm you freshmen, but compared with what the student of the present day has to get up and go through with, I must confess that even we of my period, 35 years ago, had an easy time of it. Two sessions of six months each, a series of lectures on chemistry, anatomy, very elementary physiology and horse and cattle pathology so called, not much you will say compared with what you have to face and acquire a knowledge of, less when I tell you that the second session's work was in my recollection just an almost word-for-word repetition of the first's. It could not be otherwise as all the students sat together—the only difference between what was called the senior and the junior class being that the former at all lectures had a sort of prescriptive right to occupy the front benches. Botany, if thought of, was not taught, bacteriology was unborn, and the microscope in its very occasional introduction was only in what it revealed, interesting to comparatively few of us, and not as it is now, a compulsory and charming study, and most valuable accomplishment of a majority. The examination, however, in those days was a very stiff one, excuse the phrase, if we did not have so many subjects to get up as you have now what we did have, had to be passed in one go. The examining board so far as the status professionally of its members was concerned was a very high-class one, and the penalty for failing to satisfy them, relegation always to another year's study. You are privileged to present yourselves for examination in sections of your studies, but it is just open to argument whether the system is not being overdone. I think it is somewhat, for while I agree that with so many subjects to get up, it would be impossible to revert to a system which would require you as it did us to get up all your work for one examination, I do think we would have harder headed men in the end if we had fewer examinations. There seems to be always a percentage of men who have brain capacity only for one or two subjects at a time. I question if, in these days, when the best only can hope to succeed, most of such men are not wasting their time. You, of course, will not agree with that, I do not expect you to, nevertheless I may be permitted to say, that in my judgment the present system is one that I consider as passing made easy, and whether it is to be an ultimate advantage time will demonstrate. There can be no doubt, gentlemen, that the collegiate instruction of early days, suffers by comparison with that of the present. I presume it was in the main found to be sufficient for the times, and yet it has often been a marvel to me, as doubtless it has to others, that nevertheless, and within a few years of each other, so many brilliant veterinarians were turned out. Why! speaking of the Scotch schools alone some of the past and many of the present and most distinguished teachers, many of the most eminent practitioners, civil and military, were graduates of the period I refer to. Never before, never since in the history of veterinary progress in this country has such a cluster of well-known names, come so close upon each other's heels. Let us mention just a few. Mr. Barlow, a most amiable and accomplished gentleman, whose too early death was one of the first great losses the profession experienced. Drs. George Balfour and Allan Dalzell—who among us that ever listened to the latter will ever forget him, Finlay Dun, one of your present, I think the oldest, and probably the most esteemed among your examiners, and the author of the best text-book on veterinary therapeutics

in the English language, Colonel Halien and General Sir Fred Fitzwygram, Dr. George Fleming the late, and Colonel Lambert, the present Director-General of the Army Veterinary Department, our good friend Professor Duguid and Professor Law, the late Professor Strangeways and Principal Robertson, our friends Principal McCall and Principal Williams and still later Principals Andrew Smith and McEachran, both of whom were fellow-students with myself, and both of whom, I feel proud to say, are now at the head of the teaching institutions which they each established in the dominion of Canada, and a host of others to mention any one of which in preference to another would be invidious, and exceedingly ungraceful on my part.

It has been somewhere said that when in a nation's history some great crisis arises, individuals come to the front of whom it may be said that they had been created for the emergency, so in this profession of ours it would almost seem, that just at the time when it was struggling into a front place and seeking to establish itself as a factor in the history of the country's progress, these men were born to captain it to success. In no branch of science has there been greater onward strides than in that of medicine, and that veterinary medicine occupies the high position and commands the respect which it does at the present day, is due not only to the labours of those I have mentioned, but to the fact that we have in our ranks a large number of men, who no matter what their early training was, have never ceased to be students, workers in that apparently inexhaustible field of study, which seeks to explain and prevent, quite as much as how possibly to cure disease.

Referring to the necessity for this, the late Professor John Gamgee in an address delivered to his class in 1857 said, "the science of comparative pathology in its present incomplete form may be based on the rumour and scattered observations of men of all kinds, but its future development must be entrusted and indeed will be effected by those who can take comprehensive and philosophical views on medical questions."

Gentlemen, when John Gamgee uttered those to be prophetic words, which indeed were a prelude to the note of alarm he sounded, not for the first time, in the interests of animal economy, it was not the first time he had—and in this so far as I know he stood alone among veterinarians—pointed out how the flocks and herds of the country were then annually decimated by diseases, the etiology of which, as we now know, was not only not understood, but which were not without violent prejudice inquired into. He had already predicted that in the then total absence of precautionary measures—that Rinderpest, that ever present although occasionally dormant scourge of eastern countries, was almost certain to be introduced here; and he also saw and pointed out, thus early in our history, that those two scourges, foot-and-mouth and pleuro-pneumonia could also be combated by measures, other than those then employed. Disease was rife, it was everywhere, and mostly always. But whatever men's thoughts were, no concerted action was taken for its suppression; it unhappily had not, except in a very limited degree, become recognised that much of it was contagious, that it spread owing to the entire neglect of the most elementary precautions, and that it was mostly preventable.

It may occur to you to ask, whose fault was that, where was the veterinary profession? Well, gentlemen, as far as Scotland was concerned, Barlow being dead and Gamgee not listened to, it was nowhere. The traditions of the teaching of the period had still too great a hold over the perceptions of the average veterinary surgeon, to permit him to see their absurdities. Men follow their leaders; at that time there were practically in Scotland, only two —one who recognised the possibilities and presence of contagion, the other who was most relied upon, but as it turned out unfortunately so, who denied their existence. I was a student of the latter's, and with the exception

possibly of glanders, I do not recollect that we were ever taught that any single disease was contagious, that they were communicable between animal and animal, and that some of them were communicable from animal to man. Notably that rabies—the most certainly fatal disease communicable, was contagious at all, was scouted as preposterous, and a few little anecdotes used to be told in support of the dogmatism. Speaking from my own experience I am prepared to, and do assert, that it would have been much better for us, had we in the case of many diseases been left, or recommended to arrive at conclusions regarding them just from our own individual observations. But no, we might think what we like, but to express in the slightest degree any opinion opposed to what we were taught was an almost unpardonable, and frequently a not forgotten heresy of the worst kind. Well do I recollect the dressing down which I got from that otherwise illustrious teacher, Mr. Dick, when in all the innocence and candour of youthful but probably too ardent studentship, I said to him that there was something in the constant recurrence of pleuro-pneumonia in certain byres which to my mind suggested contagion as the cause.

As an old student of Professor Dick, one who received many benefits at his hands, I will allow no one to outstrip me in my admiration for him in very many ways. We owe him a never-to-be-sufficiently-paid debt for being the founder of the first veterinary institution in Scotland, and in this for being practically the founder of many of our fortunes. He was a wonderful diagnoser of the seat of lameness in horses, and teacher of its causes and treatment, a faculty which he seems to have transmitted to many of his students. He taught us what professional integrity and firmness of opinion was, and set us a constant example of untiring energy and devotion to the routine of clinical and other professional work. He constantly impressed upon us the necessity of thinking for ourselves, but, with a strange contrariness, only so long as our conclusions were not at variance with his, for he could never, in my recollection, listen with that patience which is a characteristic of the teacher nowadays to the expression of our thoughts without firmly putting us down if what we ventured to say in the least degree implied that there might be a possible doubt as to the absolute correctness of his views. He was a man of iron, the Bismarck of the profession at that time. Gamgee, his rival, was his very antithesis, and it must have been a bitter pill for the older man to swallow to acknowledge that the younger, as regards the contagious diseases, was right, and that he was wrong. Influenza and strangles in horses, anthrax, foot-and-mouth, pleuro, and rinderpest in cattle, distemper and rabies in the dog were none of them regarded as contagious. We were taught that what produced a case in one animal was responsible for its occurrence in others. Quite so, only not as we now understand how and why some diseases spread. When left to themselves, pleuro-pneumonia, for example, was said to be one of those epizootics which depended upon atmospherical influence for its occurrence, and it was said there were examples of a similar nature in the vegetable kingdom, and that the notion that it arose from infection had given rise to the most extravagant proceedings for its suppression. What do you think of that?

Gentlemen, I think you will have gathered from what I have told you that while we in those days, as in the present, had, no doubt, much to learn, many of us subsequently, and that, too, very speedily, found that we had much more to unlearn—often a more difficult task to accomplish than the first. It was no fault of our teachers if we were not good anatomists. Indeed, I do not think that the subject is either taught or got up any better now than it was then. The principles and practice of shoeing, clinical medicine and surgery—the former very much, such as it was—bleeding, blistering, and physicking were daily largely in evidence. But of pathology, that branch of medical

science now so much to the front, and on a knowledge and due appreciation of which so much of the successful practice of medicine depends, as then taught—well, perhaps the less said the better. I congratulate you, gentlemen, however, on the very different conditions, in this respect, under which you will prosecute your studies.

And now let me say a few words about what I daresay some of you will think is of more importance. You are seeking to enter our profession at a time when many of those already in it are disposed to think, nay, go as far as to say it, that it has seen its best days; that it is now, from a purely monetary value point of view, at a standstill, and that any movement in it now is just as likely to be backward as forward. The cause assigned is overcrowding, and a necessary greater and keener competition for practice lowering its earning power.

I cannot say that I entirely share that opinion, and I counsel you not to pay *too* much attention to it. No doubt we have become of late years somewhat overcrowded—what profession has not?—and, as a result, there is unhealthy competition where, in many cases, there was formerly no necessity for anything of the kind. Unfortunately also we are considerably shut out now from our colonial dependencies and other countries, where formerly a good number of our graduates went. India, Canada, the States, and Australia are now abundantly supplied with the home-made veterinary surgeon, trained in and turned out from their own schools, and naturally expectant, and likely to receive, where deserving of it, a large measure of preferential support. We cannot expect that, perhaps, so many of our men will in the future do so well in those countries as some have done; but there, as here, they will, no doubt, have their share of what is going, and it will remain for us to be thankful if they, who being educated abroad, do not ultimately seek to find a field for their labours here—more, I for one, would not be surprised, if I live long enough, to hear of our colonial brethren, at any rate, claiming by way of reciprocity, to have a right to do so. So far as we are concerned at present we may console ourselves with the knowledge that the world has not ceased to grow; that new fields are opening out; that a long period of trade depression seems to be passing away; and so long as that is the case I am not going to believe that there is likely to be less need for our services than there has been hitherto. As a matter of fact, I do not see that in the great cities and towns we are in any less demand; nor do I think that electricity, or any other new motor, is anything more than a bogey. When railways superseded the old stage coaches, the destruction of every business in which horses were an essential was foretold. Well, did the croakings of the prophets come to pass? No; on the contrary, the number and uses to which horses were put so much increased that they rose immensely in value, a circumstance which alone, of itself, rendered their health a matter of serious consideration, and necessarily brought our services more largely into requisition. I grant you, however, that the average country practitioner, much of whose work lies among cattle, must have had his income somewhat seriously impaired by the operations of the Contagious Diseases Animals Acts, as recently applied. Some of us in the towns have felt it a little, too. The diseases scheduled in the Act have, some of them, been practically wiped out—they don't exist now to be a source of revenue to anybody. You will hear of them, but it is more than doubtful if in this country you will ever again see much of them. The goose has been killed that laid, for many, a very nice little golden egg. The doctors have the pull over us there. They don't stamp out their diseases, their subjects, and their living. *We* wouldn't enjoy the prospect if they did.

In connection with the working of the Contagious Diseases Animals Acts, I do not think our profession has been well treated; on the contrary, we have been and are being treated shamefully. To us this country owes its present

freedom from certain contagious maladies. What has been our reward?—paid in coin of the realm for services rendered; dropped when we no longer appeared to be a necessity. Every post in the gift of the Board of Agriculture, to their shame be it said, has been given to, and there is a consensus of opinion is misfilled, by a staff whose previous calling was either that of a gentleman at large, or of so heterogeneous a kind that I imagine, in appointing them, the authorities must have had in view the probability of their ultimate absorption into other state departments. Years ago I saw a signboard over an establishment in Melbourne—possibly our friend the principal has seen it also—setting forth that the place was run by "Johnnie Allsorts." "Odd name," I remarked to a friend. "Yes," he said, in reply, "but not so very inappropriate you will admit, when I tell you that man not only deals in any blessed thing, but there is no profession he isn't prepared to take a hand in, if a case comes along." I am afraid Johnnie's kind is not confined to Melbourne. Joking apart, however, the gentlemen I refer to have no right to be where they are, just about as much as we have to the naval, civil, or combatant sections of the army services. A pretty muddle we would make of it if we were there, but not more comparatively than our friends of the animals department are making at present in their methods of suppressing swine fever. Whether or not the animals department will be entirely officered by members of our profession, none of us outside the charmed circle of Whitehall Place can tell; but in asking for such to be the case, we ask for no more than we are justly and abundantly entitled to. Not only because we have a big claim on the gratitude of the country, but because the peculiar nature of the service is one for which, by previous training, we are, best of all others, specially fitted for.

Efficiency for the service should be the first consideration in making the appointments to it—that, at any rate, seems a common-sense argument; but I am afraid influence and vested rights, if there is to be a fight over the question, will die hard. The immense possibilities arising from the discoveries being made of the specific causes of many diseases, seems to me to point to this—that in the near future the practice of preventive medicine will play an important rôle, and in this connection there is a new and very extensive field of work for our profession, providing we satisfy the public that we are fitting ourselves for it. I rejoice at this, for I have ever been a constant opponent of stamping out by the pole-axe. I admit, of course, that this method has cleared this country of pleuro; but I have yet to be convinced that such an extreme measure was not only necessary, but was the only weapon at hand for dealing with this disease. Its advocates do not seem to be in a mighty hurry to put their method in force, where I hold it is more required. I am not aware that pleuro pneumonia ever cost us the life of a single individual: how many, I would ask, does tuberculosis cost us annually? You are aware that efforts have been made, although without success, to have this horrible disease scheduled and dealt with as a contagious one. Something undoubtedly requires to be done. It is the one outstanding disease of the lower animals communicable to others, and in the form of our daily food to the human race, and, from all I can learn, the one disease which, while known to be largely preventable, is allowed to claim its yearly holocaust of victims. One precaution seems to me to be imperatively demanded: the experimental work of Professor McFadyean and others is sufficiently conclusive to establish the value of the tuberculin test in discovering affected animals. Why, then, should the authorities hesitate to enforce, or owners of dairy stock of their own accord adopt the method, and so ensure to consumers a healthy milk supply to begin with. As a corollary to such the question naturally comes up, What is to be done with the diseased? Pole-axe them, I say, there is good grounds for it in such a case; and as this would be done in the interest of

public health, let the public purse indemnify the owner. At present the owners of dairies have to be licensed: this is a sort of guarantee that their premises and utensils are clean. Rules are in force to guard against the transmission of typhoid and other diseases through the medium of milk, and rightly so; but it is just as necessary for the public to be as far as possible guaranteed that the original producer is also healthy. This can now be done, should be done. Let us work together to the end of seeing it done, or the ubiquitous officer of health will be there before us.

And now, gentlemen, I must draw these desultory remarks to a close. I know that my friend Principal Williams will, as usual, have something to say to you; and I feel that I have already occupied too much of your time and of the afternoon's proceedings. Your aim and purpose, gentlemen, I take it, is to become members of an honourable and, next to the medical, of a noble profession. I know of no higher mission, none certainly more gratifying to the lover of animals, than to minister to their sufferings. Our faithful servants in health they deserve our every care under disease. The way to graduation is now much lengthened and possibly a little more difficult; but there is this to be said, here you will find, here you will get, not only all the scientific training the Royal College of Veterinary Surgeons requires of you before awarding you its diploma, but from the College staff you will, I am sure, receive every personal assistance, every help in the little difficulties which are sure to arise in the prosecution of your studies. The profession is not a bed of roses, neither is the way leading into it. I have told you, gentlemen, that the profession is somewhat over-crowded; let me, therefore, impress upon you the absolute necessity there is for you making yourselves the best who enter it. The good men will always, sooner or later, come to the front; and in spite of pessimistic utterances to the contrary, be assured there will always be room for them. Let the bad and indifferent ones come from where they may, I hope I may say of you that there will be as few as possible from here. Keep your eyes and your ears open, in your class rooms you will receive the scientific groundwork; but it is in the yard, the stable, the forge, the byre, and the field that you will have to learn from close observation the many things which go to make up the superstructure of a good clinician, of a successful veterinarian. Do not consider any work beneath you. I counsel you to devote all the time you can to clinical work, to what you might consider the most unimportant items, to the handling of, and acquiring a knowledge of, the habits and appearances of animals in health, to close observation of the appearance, gait, and other symptoms under lameness, and the various ailments which you will have opportunity of seeing. Do not neglect the forge; learn to use, if you can, every tool or instrument used by the shoeing smith; he who can do so, I can assure you from experience, is in a very different position from him who cannot. I need not tell you why, further than that I am afraid that in foot cases a large number of young veterinary surgeons do not exhibit the readiness to recognise, nor the ability to deal with, that should be expected of them. This is just because they won't take the trouble to become practically at home with the foot. You are apt to think it "work for the smith." Don't do so, lest you find yourselves in many places, and, as a result, it may be of an actual superiority, superseded by that new creation—the registered shoeing smith. In your studies be diligent; it is the one way in which, in a sense, you can repay those who send you here. Let your conduct be that of gentlemen; cultivate good comradeship. They say all work and no play makes Jack a dull boy. Very well, let it be work with some play—not play and some work; and let the aim of each one of you be that of the whole school, to uphold and raise its lustre as your *Alma Mater*. In conclusion, gentlemen, let me wish you enthusiasm and good health to carry out the work upon which you have entered to-day, success in your examinations, and finally a prosperous, honoured, and happy long life in the future.

On resuming his seat he was loudly applauded.

On the motion of Principal WILLIAMS, seconded by Captain FENTON, A.V.D., a cordial vote of thanks was awarded to Mr. Rutherford for his address, and the proceedings terminated with a cordial vote of thanks to the chairman.

ROYAL COLLEGE OF VETERINARY SURGEONS.

A QUARTERLY meeting of the council was held on Friday, the 4th inst., at 10, Red Lion Square, Mr. J. F. Simpson, President, in the chair. The members present were:—Gen. Sir Frederick FitzWygram, Professors Dewar, Edgar, McFadyean, Penberthy, Pritchard, Shave, and W. O. Williams, Messrs. Abson, Beddard, Bower, Dollar, Elphick, Faulkner, Fraser, Hunter, Hunting, Kidd, Lambert, Lawson, Locke, Mason, Mulvey, Peele, Trigger, and Wragg; Mr. Thatcher (solicitor), and Mr. A. W. Hill (Secretary).

The SECRETARY read the notice convening the meeting.

On the motion of Mr. FRAZER, seconded by Mr. LAWSON, the minutes of the previous meeting were taken as read and confirmed.

Absentees..

The SECRETARY said that he had received letters from Messrs. Thompson, Hartley, and Barrett, regretting their inability to attend the meeting.

Correspondence.

The SECRETARY said that a letter had been addressed to the Council by a gentleman who was the holder of diplomas from the Royal Danish Veterinary College asking him if those diplomas entitled him to registration in England. The Council, he said, had not granted anything of the kind up to the present, nor were there any regulations or bye-laws allowing them to do so.

On the motion of Mr. MULVEY, seconded by Professor EDGAR, it was resolved that the usual letter be written to the applicant.

The SECRETARY stated that Mr. Hamilton had applied six months ago for recognition and obtainment of the diploma of the R.C.V.S. by virtue of his holding the Highland Agricultural Society's certificate. Professor Williams, at a previous meeting of the Council, had said that he should not be satisfied unless he had letters of identity proving that this Mr. Hamilton was the same gentleman who had passed his college at such and such a date. He (the Secretary) had now received the required certificate from Mr. Hamilton, signed by magistrates and two or three members of the profession who knew him to be the same person.

On the motion of Mr. MULVEY, seconded by Mr. ABSON, it was resolved that a diploma, duly signed by the President, be forwarded to Mr. Hamilton, he having furnished the proper guarantees.

The SECRETARY read a letter from Mr. Baxter acknowledging the receipt of a cheque for £50 as a donation to the scheme of the National Registration of Farriers and Shoeing Smiths, enclosing a copy of the following resolution which was unanimously passed at the meeting of the committee of that body:—"That the best thanks of this committee be given to the R.C.V.S. for their liberal donation of £50 towards the funds for carrying on the Registration scheme, and that the Secretary be instructed to write to the Council of the College expressing the great pleasure the Committee feel at the continued interest taken by the College in the scheme which, the Committee are more than ever convinced, cannot fail to be of immense advantage to the trade."

The SECRETARY read a letter from Mr. Peter Moir, on behalf of the

Scottish Metropolitan Veterinary Medical Society, enclosing the following petition:—"The President and members of the above Society, which numbers on its roll many of the leading veterinarians in Scotland, are of opinion that the rapid and alarming spread during late years of bovine tuberculosis among the cattle generally, and the dairy stock in particular, of Great Britain and Ireland, cannot but be regarded in the light of a great national danger, and the stringent measures to prevent the extension of this dangerous and insidious disease are urgently necessary and should at once be entered upon. They therefore respectfully request the influence and aid of the President and Council of the R.C.V.S., and to bring these indisputable facts and the opinions formed thereon to the notice of the Minister of Agriculture. Further, that the Royal Commission formed to investigate this disease, in relation to its danger to human life, had some months ago submitted their conclusions to the Government that tuberculosis was prevalent in cattle, including dairy stock, and was communicable to mankind through the consumption as food, of their milk and flesh; and this Society regrets so grave a state of matters should continue to exist, unheeded by the Government. It is, moreover, their opinion, (1) That bovine tuberculosis should be scheduled in the Contagious Diseases Act of 1894. (2) That all dairy cows should be placed under veterinary supervision. (3) That among all suspected herds and dairy stock the use of diagnostic test 'tuberculin,' under scientific supervision should be made compulsory. The co-operation and support of sister societies in the veterinary profession have been earnestly requested, as the Scottish Metropolitan Veterinary Medical Society considers that a duty is devolved upon the whole profession to combine to strengthen the cry to the Government for the adoption of measures whereby bovine tuberculosis in this country may be checked and ultimately extirpated. It would, in conclusion, further point out for the consideration of the Government, that the longer the delay the greater the difficulties and the attendant expense to cope with the disease that will inevitably follow."

The SECRETARY also read a letter from Mr. W. Awde on behalf of the South Durham and North Yorkshire Veterinary Medical Association dealing with the same matter.

Mr. TRIGGER: I think we all recognise the importance of the subject which these societies have laid before us in their letters. They are subjects that must certainly be dealt with at a later date, but it would be quite impossible to take up so gigantic a matter to-day. I would therefore suggest that the letters be referred to a sub-committee to consider the matter, and to advise the Council as to what they consider the best steps to take.

Professor MCFADYEAN: I should like to raise the question whether it is the serious intention on the part of this Council to begin the consideration of such questions as this. Nobody can deny that it is a very important question, but there are many other important questions of a like kind, and if we are to be constantly asked to deliberate upon these legislative measures, I am afraid that it will seriously hamper the proper business we have to carry out. The document which has been read is rather strongly worded. It is very easy to call a fact "indisputable," but I should be inclined to dispute some of the things which are called facts in it. It conveys the impression that the Special Committee of the Royal Commission which investigated this question gave a report to the effect that this was a serious danger to human life. I have carefully read the report more than once, and I maintain that it rather conveys the opposite impression, that the members of that Commission express the opinion that there was comparatively little danger from the use of tuberculous carcases, and that a large portion of the danger to human beings in connection with the sale of tuberculous flesh was from the contamination outside—from butchers' knives used in cutting tuberculous lesions

Mr. HUNTING: I should like to say that although we have only had the opinion of two veterinary medical societies the subject has been discussed at others, and they have expressed very similar ideas. As has already been said, it is a question which must soon come before the British public, and if we lag behind and take no interest in the matter we shall be left out in the cold. I think, not only in deference to these societies, but in deference to the general opinion of the veterinary profession, a committee should be appointed to consider the matter and do the best they can. I beg to submit that proposition.

This was agreed to, and on the motion of Mr. TRIGGER, seconded by Mr. LAWSON, the following gentlemen were appointed to act on the committee: The President, Mr. Hunting, Mr. Mulvey, Mr. Kidd, Prof. Edgar, Mr. Abson, Prof. Pritchard, Prof. Penberthy, Prof. McFadyean, Mr. Mason, and Prof. W. O. Williams.

The SECRETARY read a letter from Mr. Maurice F. Linch, of Tipperary.

On the motion of Mr. HUNTING, seconded by Mr. FRASER, it was resolved that this correspondence be sent to the Board of Agriculture.

The PRESIDENT: I ought perhaps to report to the Council that an invitation to attend the Veterinary Congress at Berne reached me only forty-eight hours before the Congress met. That, I need hardly say, gave no time to call the Council together in order that they might select a delegate to send to Berne, and in consequence the R.C.V.S. was not represented. I believe that the failure to send an invitation to the College earlier was due to some misunderstanding; but, finding that the Royal College was not included in the invitations I, as your President, thought it right to investigate the matter, in order that on other occasions we might not be left out.

Presentations.

The SECRETARY announced the following presentations:—"The Journal of Comparative Pathology," by the editor, Prof. McFadyean; the Annual Report of the Board of Cattle Commissioners, by Dr. Osgood in America; a bound volume of *The Veterinary Record* by the editor, Mr. Hunting; the Annual Statistical and General Report of the Army Veterinary Department by the Chief Officer of the Army Veterinary Department, Colonel Lambert; a set of parturition instruments, minus the crutch, for the Museum or for use at examination, by Mr. Thompson.

On the motion of Mr. FAULKNER, seconded by Mr. KIDD, a vote was accorded to the donors.

Appointment of Treasurer.

On the motion of Mr. KIDD, seconded by Mr. MULVEY, Mr. F. W. Wragg was unanimously re-elected as Treasurer.

Appointment of Secretary to the Scottish Section of the Board of Examiners.

The PRESIDENT: As you are aware some time ago Mr. Rutherford resigned his position as Secretary for Scotland. It was really unnecessary that any letter of resignation should be sent because every officer has to be elected annually. At the present time we are without a secretary for Scotland, and I should be glad to receive nominations.

Prof. MCFADYEAN: Might I suggest, whether, seeing that the late Secretary has resigned, it might not be advisable to advertise the office? I quite understand that it is not obligatory to advertise, but still, it might be wise and expedient to do so.

Mr. FAULKNER: Has it been customary of late years to advertise for a gentleman to fill this position?

The PRESIDENT: I believe on the last occasion we did advertise.

Prof. McFADYEAN: I shall move that the office of Secretary of the Board of Examiners in Scotland be advertised for; and the remuneration to be 60 guineas per annum.

Mr. HUNTING seconded the motion, which was agreed to.

The PRESIDENT: As a special meeting will be necessary we had better proceed to fix a date now.

On the motion of Mr. Trigger, seconded by Mr. Mulvey, it was resolved that a special meeting be held within the first ten days of November, at the discretion of the President.

Registration Committee.

The SECRETARY read the report of the Registration Committee, from which it appeared that a large number of members had been cautioned with regard to advertising and in nearly every instance had at once given undertakings to discontinue. The committee had been considering the case of chemists using the words "Veterinary Chemists" and selling veterinary preparations; they had selected a test case which was in the hands of the solicitor for the purpose of obtaining such evidence as would lead to the conviction should a prosecution be instituted. The committee had also before them cases of several persons using the words "Veterinary Forge." Cautioning notices had been given in each instance, and in most cases had been complied with. There had been several complaints with regard to persons using the words "Veterinary Surgeons," or words of a like nature, and the committee had instructed the solicitor to investigate the complaints, and should he consider the evidence sufficient, to apply for leave to prosecute. The committee also had before them the applications of Mr. Joseph Colthurst Thompson and Mr. Geo. Garnett, for the restoration of their names to the Register, which had both been struck off according to sub-section 4, section 5, of the Act. Satisfactory reason, duly authenticated, had been given in both instances, and the committee recommended the restoration of their names to the Register.

On the motion of Mr. Trigger, seconded by Professor Pritchard, the report of the Registration Committee was adopted, and there being a full *quorum* present the seals were affixed to the authorities for the various prosecutions.

Election of Auditors.

On the motion of Prof. Pritchard, seconded by Mr. Wragg, Messrs. Woodger and Warner were re-elected as auditors.

Examination Committee.

The SECRETARY read the report of the Examination Committee, which stated that by the instruction of the Council letters were sent to those examiners whose reports and letters needed some explanation, and satisfactory replies had been received from the Chairmen of the different sections, and assurance received by the Committee that in future the "markings" at the tables (A and B) would be conducted according to the wishes of the Council. The Committee recommended that the Chairman of Class B be informed that only two students were to be examined at a time, and that copies of the resolution be sent to the Chairman of this class, and also to the Secretary of the Board of Examiners in Scotland. The Committee regretted that some friction had occurred at the last examination, and that letters of complaint had been sent to the Council, and recommended the Council to let the matter drop. The Secretary reported that he had written to Dr. Sims-Woodhead in regard to the microscopic specimens which had been suggested as a useful addition to the examination (Class C oral morbid anatomy), and he promised to write to Mr. Cox, the chairman of the section, as to what specimens he considered would be advisable to obtain. At a subsequent meeting the

Committee had met to consider the letter from Dr. Sims-Woodhead in regard to specimens for the pathological table, and recommended the Council to request the Secretary to inform the examiners in pathology that it was their desire that students should be examined on pathological specimens furnished by their teachers, and that when the specimens sent by any teachers were considered inadequate, supplementary specimens should be provided by the examiners.

The PRESIDENT: The Examination Committee at their meeting on the 1st August passed a resolution recommending to the Council that the matter with regard to the unfortunate misunderstanding between the examiners and the secretary should drop—they also intended that the secretary should write and ask gentlemen concerned if they would assent to this course. Unfortunately, the secretary misunderstood his instructions and interpreted the resolution as carried to mean that it be also a recommendation to the Council that the Council should instruct the secretary to write and ask the gentlemen if they assented to the course. I point that out because it is evident that a mistake has been made. It has now been corrected in the report, but without the explanation I have given it may seem strange that no replies had been received from these gentlemen.

Mr. MULVEY moved and Mr. Abson seconded the adoption of the Report.

Mr. HUNTING: There was a resolution adopted by the Committee yesterday which is embodied in that report, and which I wish to ask the Council not to adopt until we thoroughly understand it. You will remember that a letter was received from Dr. Woodhead and that the secretary had replied, and that Dr. Woodhead had said that he would write to Mr. Cox stating what specimens he desired. Now that remark of Dr. Woodhead shows that he is under the idea that this College is going to supply its own microscopical specimens in future, as they supply all other specimens that they are able to obtain. In one of our bye-laws it says that examiners should report after every examination on everything with which they are satisfied, and should give a general idea of the result of the examinations and what they thought of them. We have asked the examiners to report, we demand a report, and this report of the pathological examiners is to the effect that they are dissatisfied with the present method of supplying pathological specimens for their use. We must surely support our examiners, and unless there is some good cause stated, when examiners complain of anything and make a suggestion we should as far as possible adopt their suggestion. In this case they complain that they cannot at all the schools obtain such perfect microscopical specimens as they would desire and they ask us to obtain them for them. At the commencement the question was whether we, the College, were to obtain specimens or whether we were to continue begging and borrowing specimens from other people—whether in fact we were to make use of the voluntary help which has very kindly been extended to us in our weaker days. The schools have very kindly supplied us with rooms to examine in, and with specimens of all kinds, but the day has surely arrived when we might at any rate attempt to supply our own specimens. That was considered, and that object was really approved by this Council twelve months ago when they spent a good deal of money in obtaining instruments and models for examination. The idea—a very good one, in my opinion—was that we would not put the schools to trouble, and that we would have one set of specimens to submit the whole of the students of the four schools to. What is the difference between microscopical specimens and other specimens? Surely we can obtain them from various sources, either by begging, borrowing, or better still, paying for them—that would be fair to every school, because they would be taken round to every student. I ask you, then, not to adopt the latter portion of this report, which

says that we should continue to subsist upon the charity of the schools for our microscopical specimens, and that when the schools are unable to afford such specimens as the examiners require the examiners should make up the difference themselves. That is a little cool, it strikes me. Just notice the insult to the schools which I am trying to protect—"when the schools are unable to provide proper specimens." If a school sends in three specimens or meets with an accident, the examiner would then have to supply the whole of the 60 or 150, whatever was necessary, and if he is to carry them all round with him why trouble the schools at all? Let us go a little further, and ask him to supply them altogether. He has got them, he must have them, or he could not make up what is required. Or what is better, let us be independent of the schools and examiners and everybody; let us be the examining body, and supply the materials for examination ourselves. I think the whole case is so clear that all I ask is that you shall not do things in a hurry. I ask you to remember that a magnificent majority of *one* carried this yesterday. Let us, in short, ask Dr. Woodhead and Professor Delépine what they want, and to give us a suggestion as to how to obtain the specimens they require. Let us adopt the report with the exception of the last part, and then refer that back to the Committee for further consideration,

Prof. McFADYEAN: The facts of the case are these: The examiners in pathology have in the report given us to understand that at one or more of the schools an inadequate number of specimens were sent up for the examination in May last, and they suggest that in order to permit of their making up perfect specimens the various teachers of pathology should be asked to send in sets of specimens. I yesterday pointed out to the small committee which considered this subject that in my view the examination had, upon the whole, been conducted with sufficient stringency and with tolerable fairness in the past, and that pathology is such a wide subject that if one were to attempt to illustrate by 300 sections it might still be said that some portions of the field were insufficiently represented, and when a teacher desires to illustrate his lectures he can hardly, in the small time allowed for the teaching of pathology, do more than drill them on say 60 or 80 preparations. He takes those which best illustrate the lectures he has given, and another teacher may take another 60 or 80 out of the 300 to instruct students upon. It would be impossible to get up a set of preparations in the way suggested by the examiners. They suggest the Council should ask the teachers in the various schools to send them in a stock set of preparations, to become their property, to select what they like, and throw the others away.

Mr. HUNTING moved as an amendment "That the report be adopted, except so far as the obtaining of pathological specimens is concerned, and that the Secretary be requested to write to the examiners for a full expression of their desires."

Mr. MASON seconded the amendment.

Professor McFADYEAN: I should like to meet the views of Mr. Hunting in this matter. Will he accept this—"That the examiners in pathology be informed that the Council desire them to obtain whetever specimens they consider necessary, and from whatever source they consider best."

Mr. HUNTING: I will accept that if you will add that the Secretary shall obtain their reply, so that we may know what they are going to do.

Professor McFADYEAN did not agree to this addition, and subsequently his suggestion was abandoned.

Mr. HUNTING'S amendment was then put to the Council and lost, nine voting for and 12 against. The report of the committee was then adopted.

Notice of Motion by Mr. Kidd.

Mr. KIDD in moving—"That a deputation be appointed to wait upon the

Right Hon. W. H. Long, M.P., Minister of Agriculture, with reference to the claims of qualified veterinary surgeons as inspectors under the Contagious Diseases (Animals) Act."—said: Nearly two years ago I brought forward a similar resolution. It was then thought by the Council that it would be better to send a memorial, but I think, as time has shown, it would have been better if we had proceeded to interview the Minister. The terms of my resolution are not perhaps so clear as to indicate the grounds for the course which I have now taken. I do not suggest that any steps be taken with reference to the appointment of veterinary inspectors; but I think something ought to be done in respect to the work they do and the work they ought to do. I do not think it is sufficient that a veterinary inspector should simply go to a place where there is a dead pig, make a post-mortem, and put part of internal organs into an indiarubber bag, send them to London, and have done with it. Pleuro-pneumonia certainly was stamped out by the Board, but at an immense cost. As I said in February, 1894, the Board of Agriculture had in swine fever a very different disease from pleuro-pneumonia to deal with, and they would not stamp it out so easily. Time has proved that the views then expressed were correct, for instead of that disease being mastered it has kept steadily increasing ever since, as the returns show, and I venture to repeat the assertion that swine fever will not be subdued, far less stamped out, until a more thorough system of inspection is established. I again repeat that a more serious disease, animal tuberculosis, is ripe for serious consideration by the Board, and that it will require cautious and careful grappling with. The remedy, in my judgment, is a simple one. Abolish the Animals Department of the Board of Agriculture, and substitute for it a Veterinary Department with veterinary officers. Let that Department have administrative powers, and let the local authorities have executive powers, compulsory and uniform. Suppose war were declared, and our army in the field was controlled and directed by the War Office, would you expect anything but disaster and defeat? In the same way you can only expect losses and failure in eradicating swine fever by the Animals Department. I feel that the right man is at the head of the Board of Agriculture. Mr. Long has had as much experience of stock as most men in his position. He has farmed pretty extensively, and he is one of those who will investigate for himself such matters as are brought before him, and whatever he takes in hand to do he does thoroughly. These are the reasons, then, and I think strong reasons, why this Council should endeavour to lay before Mr. Long those matters which have caused us to feel grieved that our duties have been transferred to those incapable of performing them, and which have given the Board cause to inscribe on its doings during the past two years the word "failure," and which have caused immense loss to the country. If this Council were unanimous in sending a deputation to Mr. Long, or ask him to receive one, which I am sure he would, I feel certain that eventually we would materially benefit. I beg to move the resolution standing in my name.

Mr. HUNTING: I will second Mr. Kidd's motion, and especially I would like to do so if he will leave out the detail about veterinary surgeons and inspectors, and make his resolution read—"That a deputation be appointed to wait on the Right Hon. W. H. Long, M.P., Minister of Agriculture, with reference to the Contagious Diseases (Animals) Act."

Mr. KIDD: I will accept that with pleasure, and alter it in that way.

Professor DEWAR: I should like to hear Mr. Hunting's views as to what he thinks this deputation is going to bring before the Minister of Agriculture.

Professor MCFADYEAN: What are the specific grounds of complaint?

Mr. HUNTING: My grounds of complaint are very simple. First of all the deletion of the Veterinary Department from the State; secondly the reduction of the number of veterinary officers of the State; thirdly, the use of laymen

occasionally for professional work; and lastly, the non-employment of professional men where they might be employed.

The PRESIDENT: If there is no amendment I will put Mr. Kidd's motion.

The motion was then put to the meeting, and carried: and it was resolved that the deputation should consist of the President, Mr. Kidd, and Mr. Hunting.

General Purposes Committee.

The SECRETARY read the Report of the General Purposes Committee, which stated that it had fully considered the letter from the Board of Agriculture *re* Compulsory Notification, and recommended to the Council that the profession be consulted by a letter as follows, before formulating a reply to the Board:—

> "I am desired by the Council to submit to you a copy of a letter received from the Board of Agriculture. The Council prefer not to give any opinion until the profession has been consulted, and I shall be obliged if you will within the next fourteen days let me know whether you are in favour of adopting such an Act.—Your obed. servant,
>
> (Signed) ARTHUR W. HILL."

On the motion of Mr. MASON, seconded by Professor PRITCHARD, the report was adopted, and it was resolved that the circulars be sent out forthwith.

Steel Memorial.

The SECRETARY read the report of the Steel Memorial Committee, which stated that the Committee had examined the finished model of the medal, that they approved of the work, and had ordered the completion of the die.

On the motion of Prof. PENBERTHY, seconded by Mr. FRASER, the report was adopted.

Finance Committee.

The SECRETARY read the report of the Finance Committee, which recommended that the present liabilities, amounting to £291, should be discharged, leaving a balance at the bankers of £59. It also recommended that the sum of £55, received from the various societies, be transferred to a separate account at the bankers to the credit of the fund of the British Institute of Preventive Medicine.

Mr. TRIGGER moved, and Mr. MULVEY seconded, the adoption of the report, which was agreed to.

Date of Professional Examination.

Prof. MCFADYEAN suggested that the written examination might be held on Friday, 13th December, the oral beginning in London on the following Monday, viz., the 16th.

Professor WILLIAMS said that of late years the majority of students came from Scotland and not from England, and proposed that the written examination should commence in Scotland on the 13th, and the orals on the 16th.

Mr. LAMBERT seconded Professor Williams' proposition.

Professor MCFADYEAN then moved as an amendment that the written examination be held on the 11th December, and the orals, in London, on the following Thursday, in order to allow ample time to finish in Scotland, taking the same order as before.

Mr. TRIGGER seconded the amendment.

Mr. HUNTING said that if it were a matter between the Scotch and English schools as to which should be examined first, the fair thing would be to make the examination alternate, one year in England and the next in Scotland. Last year it was held in London first, therefore this year it ought to go to Scotland.

The PRESIDENT: We had better separate the oral from the written. I will

put Professor McFadyean's amendment that the written examination be held on the 11th December all over the kingdom.

This was agreed to, eight voting for, and six against.

Professor McFADYEAN moved "That the oral examination be held in London on the 12th December."

Mr. TRIGGER seconded the motion.

Professor WILLIAMS moved as an amendment "That the oral examination be held in Scotland on the 12th December," and this, after a short discussion, was agreed to.

Fellowship Examination.

On the motion of Mr. WRAGG, seconded by Mr. TRIGGER, it was agreed that the Fellowship examination be held in London on December 10th.

Notice of Motion by the President.

The PRESIDENT said the following stood in his name, but he would be pleased to hand it over to any other member of Council: Alteration of regulation 2, 3rd schedule, p. 85 of Register, "That the words 'four guineas,' be substituted for 'five guineas,' and that the paragraph shall read as follows: '2. An examination fee of four guineas shall be paid for each examination.'"

Mr. LAMBERT said he should be pleased to act as mover at the proper time.

Notice of Motions by Prof. Penberthy.

Prof. PENBERTHY gave notice that he would move the following motions at the proper time:—

(1) "That advertising by veterinary surgeons in the public press, or by exhibiting or distributing circulars, books, or cards relating to their professional attainments or abilities, or respecting medicines or appliances prepared or sold by them, amounts to conduct disgraceful in a professional respect within the meaning of Section 6 of the Veterinary Surgeons' Act, 1881."

(2) "That if any veterinary surgeon shall permit his name to be used by an unqualified or unregistered person, or do permit any other act whereby an unqualified or unregistered person may pass himself off as or practice as a veterinary surgeon, he shall be deemed guilty of conduct disgraceful in a professional respect within the meaning of Section 6 of the Veterinary Surgeons' Act, 1881."

Mr. HUNTING pointed out that at a special meeting held for the purpose on May 10th a motion *re* advertising, passed at a meeting on May 1st, had been confirmed, but he could find no trace of it in the minutes. He should like to know whether a motion which had been suspended on the board for three months could come on now. He contended that Professor Penberthy was legally entitled to propose his resolutions at that meeting.

The PRESIDENT said the Solicitor would consider the matter, and report what course ought to be adopted at the next meeting.

Motion by Mr. Hunting.

Mr. HUNTING: I move "That a printed form be supplied to the Principal of each school, on which the names of all students eligible for examination shall be entered previous to each examination." I do not think there is any objection to this or that it wants any explanation; the only thing is it would bring about complete uniformity and enable us to have a paper drawn up that we could accept without any doubt whatever as to the eligible students for examination. I suggest that it be left to the Examination Committee to draw up the form.

Mr. MULVEY seconded the motion, which was agreed to.

Notice of Motion by Mr. Mulvey.

Mr. MULVEY: I beg to give notice that at the next meeting of Council I shall move "That bye-law 97 be altered in this way: to omit the words 'if the names of at least four candidates shall have been entered for that purpose.'"

The PRESIDENT: That will be suspended in the usual way.

Educational Certificates.

Professor MCFADYEAN: I am afraid, Mr. President, that no very accurate record is being kept of the educational qualifications of the candidates for the diploma at the present moment. I think if it were asked with reference to any particular gentleman who may come up for his examination next December what educational certificate he presented, the date and the subjects, nobody could supply the information.

Mr. A. W. HILL: I could, sir. Could you mention any name.

Professor MCFADYEAN: I have good grounds for my belief, although it might not be expedient for anybody if I stated them at the present moment. But in any case I think it would be wise if we directed our secretary as follows—this is not a resolution nor a bye-law, it is a mere instruction which would come into force at once:—"That the secretary be instructed to prepare and have printed for the information of each member of Council, a statement showing the educational certificates presented by each candidate for the diploma, the date of such certificate, and the subjects specified in it as having been passed by the candidate."

Professor PENBERTHY: I will second that.

Professor MCFADYEAN: Might I, in explanation, point out that it is a rather long and complicated list of certificates which is accepted by this body, and it is conceivable that our secretary or the secretary for Scotland might make a mistake; it is also conceivable that a student might desire to be examined though he was not in possession of one of those certificates. We want to safeguard that. I think for the present we might make it apply to all those who have not got the diploma; in future it will only apply to Class A. It is possible that there are gentlemen who, but for this, might get through in December with a certificate which does not entitle them to do so.

Professor WILLIAMS: I might raise an objection to that, because the secretary for England or Scotland may have accepted a certificate permitting a man to go up for his first and second examination, and that man may be stopped in his final, quite unaware of the fact.

Professor MCFADYEAN: We should like to know whether it has happened or not.

Mr. J. A. W. DOLLAR: Although a very great injustice might result to some individuals, a very much greater would result to the whole body corporate by men who have not the necessary qualifications being slipped into the profession. It is our business to prevent anything of the sort happening, and instead of attempting to shield persons who may have obtained such an entrance, it should be our duty immediately to detect and stop them, and that would be the effect of this resolution.

Professor WILLIAMS: That means that we are trying to find out if our secretaries have been doing their duties—it is a vote of want of confidence in them.

Mr. DOLLAR: It is nothing of the kind. If our secretaries have fulfilled their duties we cannot find any fault with them; if on the contrary they have failed in their duties it is our duty to reprove them and prevent them making such errors in future. We ought to consider the interests of the profession first and those of mere individuals afterwards.

The PRESIDENT: There is a bye-law which says that students who enter veterinary schools shall, prior to their first professional examination of the R.C.V.S., produce to the Secretary of the R.C.V.S. one of the certificates specified in the schedule annexed. Certainly our Secretary cannot prevent a man going up if he has already passed one or two examinations and fails to produce his educational certificate for his "C."

Professor DEWAR: Whatever the Council may decide for the future, I do not think it has any right to go back on students who have already passed their "A" examinations.

The PRESIDENT: I think it would be dangerous for our Secretary to act upon that instruction and keep a man from coming up.

Professor MCFADYEAN: I hope it is not due to the manner in which I proposed the motion, but it is merely to obtain information. I said nothing about a student being stopped.

Mr. HUNTING: I wish to remind Professor McFadyean that a strong argument he urged was that the passing of this resolution might prevent some man from getting his diploma in December. Now if that is not exactly the same, barring the wording, as preventing a man from going up, I should like to know what is the meaning of the English language. If we accept this suggestion of Professor McFadyean's and find three men whose certificate is not as it ought to be, then the natural corollary is to dismiss the secretary, but if we do not dismiss him and say that the three men produced fraudulent certificates, then the question comes whether we shall decline to examine them again and stand a law-suit for it, or what we are to do. It looks to me that if this innocent wedge gets driven home, it will split something into two or three pieces.

Professor McFadyean's proposition was then carried, 13 voting for and 5 against.

The late M. Pasteur.

Mr. HUNTING: We have just lost in M. Pasteur the greatest scientist of this century at any rate. Do not you think we ought, as a collective body, to send some mark of our esteem in the form of a vote of condolence to his family. I beg to propose that the President take steps to communicate with the family of M. Pasteur, expressing our sympathy with them on the loss they have sustained.

Mr. DOLLAR seconded the motion, which was agreed to.

The obituary list was then read, and the Council adjourned.

THE CENTRAL VETERINARY MEDICAL SOCIETY.

THE annual general meeting was held on Thursday evening, the 3rd inst., at the Royal College of Veterinary Surgeons, 10, Red Lion Square, Bloomsbury, Mr. Sidney Villar presiding. The other Fellows present were:—Messrs. A. L. Butters, Veterinary-Captain E. R. C. Butler, A. V. D., Veterinary-Captain L. T. Blenkinsop, A. V. D., J. Hall Brown, H. W. Caton, J. A. W. Dollar, Thos. C. Garry, W. Hunting, J. S. Hurndall, Professor F. Hobday, F. W. Kendall, F. C. Mahon (Hon. Sec.), Professor J. Macqueen, Professor Penberthy, R. Porch, A. Prudames, J. Rowe (Hon. Treasurer), W. Roots, Hugh Singleton, W. E. Taylor, F. Wright, F. Orford, L. Walpole; and as visitors: E. Faulkner, Manchester; and Hugh A. MacCormack.

The CHAIRMAN called upon the HON. SEC. (Mr. F. C. Mahon), to read the minutes of the previous annual meeting.

Mr. J. S. HURNDALL having regard to the fact that the minutes of the last annual meeting had been reported in the *Veterinary Record*, now moved that they be taken as read.

Mr. F. W. KENDALL seconded the motion, which was adopted unanimously.

The HON. SEC. announced the receipt by him of communications expressing the writers' regret at their inability to attend that meeting, from Mr. F. W. Wragg, Mr. J. Roalfe Cox, and Mr. A. Wheatley, of Reading.

Election and Nominations.

A ballot resulted in the unanimous election of Mr. W. Reekie, M.R.C.V.S., 556, Oxford Street, W., as a Fellow of the Society.

Mr. F. W. Dowell, M.R.C.V.S., of 128, Jermyn Street, W., was nominated by Professor Macqueen and Mr. J. Rowe; and Mr. Hugh A. McCormack, M.R.C.V.S., was proposed by Mr. J. Rowe, and Professors F. Hobday and Penberthy. Mr. J. Randolph Welsby, M.R.C.V.S., was also duly nominated.

The Report and Balance Sheet.

The HON. SECRETARY then read his report and the Hon. Treasurer's balance sheet for the past year as follows :—

Mr. President and Gentlemen,—During the session 1894—5, 17 new Fellows have joined the Society, and one has resigned. By death we have lost in the person of Professor T. Walley, both an active member of his profession and of this Society, one who at all times generously lent his aid towards advancing its best interests.

At the present time the Society numbers 140 members. During the year five council, and nine general meetings have been held. The average attendance has been 34.

Five papers or addresses have been delivered, viz. :—

1. Presidential address, S. Villar, Esq., F.R.C.V.S.

2. Report on the XVII. "Veterinary Section" of the International Congress of Hygiene and Demography, by J. A. W. Dollar, Esq., M.R.C.V.S.

3. "The Legal Aspect of Soundness," Veterinary-Captain E. R. C. Butler, A.V.D.

4. "Glanders," by Professor J. McFadyean, M.B., Dean R. V. Coll., London.

5. "Pelvic Fractures," by W. Hunting, F.R.C.V.S.

A number of interesting *post-mortem* and other specimens have been shown at the meetings, the discussions being well maintained.

The Society has during the past year made a grant of £50 towards the Jubilee Memorial R.C.V.S.

The receipts during the session have been £160 5s, 6d., expenditure £78 13s. 8d., leaving a balance of £81 11s. 10d., exclusive of £150 on deposit in the Hammersmith Branch of the London and County Banking Company.

(Signed) F. C. MAHON. *Hon. Sec.*

The CHAIRMAN : The balance-sheet is in print before you, and I am sure, if any gentleman has any question to ask concerning its items, our honorary treasurer, Mr. Rowe, will be pleased to answer. We are all glad, I am certain, that the year which now closes has been another record year in the history of our Society. Our receipts have been in excess of those of previous years.

Mr. W. HUNTING : Mr. President, you will doubtless remember that I once withdrew a motion to make a grant from the funds of this Society because of an intimation on the part of Professor Macqueen that we had not enough money in hand. I now want to give notice of my intention to bring before this Society the expediency—I may say the necessity—of making a grant to the British Institute of Preventive Medicine. I see by the printed balance-sheet that there is a balance of £81 11s. 10d. in the hands of the treasurer, and I think the fact affords me a favourable opportunity to re-introduce my motion.

Mr. ROWE : I presume we are not going to discuss it now.

The CHAIRMAN: No. Mr. Hunting merely gives notice of his motion now.

Mr. ROWE: I wish to point out that £50 of the £81 11s. 10d. has already been voted as our donation to the Jubilee Memorial Fund.

Mr. HUNTING: But is not that £50 included in the total expenditure of the honorary treasurer and honorary secretary, amounting to £78 13s. 8d., as appears by the printed balance-sheet?

Mr. ROWE: No, I have not paid it yet.

Mr. HUNTING: But it is some months since the £50 was granted.

Mr. ROWE: I have been awaiting an application for the money.

Mr. HUNTING: This printed balance-sheet affords no explanation of the separate items. One would naturally suppose that the £50 would be included in the total expenditure given as £78 13s. 8d., seeing that the sum was voted so long ago.

The CHAIRMAN: The honorary treasurer has already explained to the Council of the Society that the reason he has not paid the money over is that no application has been made for it, and he does not know to whom the £50 is to be paid.

Mr. HUNTING: Do you mean to say that the treasurer does not know to whom and for what purpose, the grant of £50 was made?

The CHAIRMAN: I mean that as yet he has not been made aware of the individual authorised to receive the money.

Mr. HUNTING: It is a peculiar explanation. I think we have a right to ask why the money has not been paid over.

Mr. ROOTS: I think that when future balance sheets are presented to us in print the different items of expenditure should be given more fully. The papsr before us to my mind conveys no idea how the money has been disbursed. All it says is: "Expenditure of hon. treasurer and hon. secretary £78 13s. 8d." I think the items of expenditure should be given.

The CHAIRMAN: I may, perhaps, remind you that the auditors have signed the balance sheet as correct. They are present.

Mr. BUTTERS: As one of the auditors I agree with what Mr. Roots has said. I may explain the reason why the items of expenditure have not been fully set forth. Our secretary was very anxious that a statement of account should be printed and in readiness for this meeting. and time would not allow of each item being got out and stated separately. It was thought that, if further information were needed, questions could be asked and answered at this meeting. The secretary has all the items of receipt and expenditure n his possession.

The CHAIRMAN: Has any gentleman any further remarks to make, or will some gentleman move that the report and balance-sheet, which we have just heard read, be adopted?

Professor PENBERTHY: I move that the report and balance-sheet be adopted, and I think we may congratulate ourselves upon having a very healthy balance.

Mr. HURNDALL seconded the motion.

Professor MACQUEEN: I am one of those individuals who would like to know something more about this £78. What was it expended for? We don't want all the items, but a few.

Mr. ROWE: I may tell you that the items of expenditure include the hire of the room for our meetings, waiter, refreshments at the rate of 1s. a head, printing, stationery, and telegrams, the reporter's charges, and cab and 'bus fares of our secretary and treasurer, who have books to bring with them to the meetings. Then the dinner account was exceptionally heavy, amounting to over £14 14s. The whole of the items of expenditure are open to your inspection, and can easily be got at.

Professor PENBERTHY: They have been audited?

Mr. ROWE: Yes, every item.
The motion was then put and carried.

Election of Officers and Council.

Messrs. Roots and Walpole having been chosen scrutineers of the voting, the meeting proceeded to the election of officers and Council for the ensuing year.

The CHAIRMAN: The first officer whom we have to elect is the president, and taking advantage of the position which I still occupy as your president, I wish to bring to your notice a name which I am sure will meet with approval from each one of you. In submitting a name to you, I wish it to be clearly understood that it is open to any gentleman to propose another Fellow of the Society as its president during the ensuing year. Few words are needed for me to commend to you the gentleman whom I have pleasure in nominating as president of this Society; and it is needless for me to explain to you the advantages likely to follow his election, so far as the dignity and interests of the Society are concerned. The gentleman to whom I thus refer is well-known to all of you and for many years he has been an active member of this Society. With these few words, I beg to propose the election as our president of Professor Penberthy who will, I believe, be willing to undertake the duties of the position if he be elected.

Mr. PRUDAMNS: I shall be only too happy to second that propositon. We have had ample opportunities for observing the high qualities of Professor Penberthy. I have much pleasure in seconding the nomination of that gentleman as president of this Society.

The motion was then formally put and carried unanimously.

The CHAIRMEN: Professor Penberthy, I have great pleasure in informing you that you have been unanimously elected to preside over the deliberations of the Central Veterinary Medical Society during the ensuing session.

Professor PENBERTHY: Mr. President and gentlemen, I accept your kindness with a good deal of diffidence. I should be sorry to deny anything that my good friend (Mr. Villar) has said of me. But I am not a very old member of this Society, and, when I was asked by the secretary some few days ago if, in the event of my nomination I would consent to stand, I tried to show him as clearly as possible how important it was that my election should not put anyone who had greater claims, out of office. I do not know anything about the rotation in which Fellows succeed to the chair of this Society, nor am I at all sure of the qualities which fit a man to become your president. I will not detain you any longer now than to say I most sincerely thank you for the honour you have done me, and I think it is an honour indeed to be the president of the Metropolitan Veterinary Medical Society. At the same time let me assure you that I will do what in me lies to promote the interests of the Society, and to foster the good feeling which has always prevailed at its meetings and everywhere else where it took a leading part. I thank you very sincerely, gentlemen.

The CHAIRMAN: We have now to elect four vice-presidents. The retiring vice-presidents are: Mr. A. L. Butters Mr. A. Prudames, Mr. S. Slocock, and Mr. F. W. Wragg.

There were six nominations, and the voting was as follows:—Mr. Villar, 20; Mr. Butters, 15; Mr. Mulvey, 13; Mr. Wragg, 13; Mr. Prudames, 11; and Mr. Hurndall, 9. The first four were, therefore, elected.

There were 16 nominations for members of Council, 12 of whom were elected. Professor Macqueen and Mr. Hurndall declined to serve again, remarking that they thought one year's service on the Council was "quite enough." Professor McFadyean, 21; Mr. H. Singleton, 20; Captain Butler, 19; Mr. Hunting, 19; Mr. J. A. W. Dollar, 18; Captain Blenkinsop, 18; Mr.

Rogers, 17; Mr. Roots, 16; Mr. H. Edgar, 16; Professor Hobday, 15; Mr. J. Taylor, 15; Mr. Prudames, 14; Mr. H. W. Caton, 11; Mr. Walpole, 6; Mr. Porch, 5; and Professor Pritchard, 5.

The CHAIRMAN: The next election is that of an Hon. Treasurer, and it affords me very great pleasure to nominate Mr. Rowe. We all know Mr. Rowe as a very energetic and valuable officer of this Society. He possesses in a pre-eminent degree two very good points in a Treasurer—he is a first-class man to get money, and secondly he is a very good hand at keeping it when he gets it.

Mr. CATON seconded the motion, which was carried *nem. con.*

Professor PENBERTHY: I have much pleasure in proposing that Mr. Mahon be the Secretary of the Society during the coming year. We all know how well he has done his work before. We have ample assurance that, if he will again kindly accept the office, the Society will have the advantage of the experience he has already gained in the position. As good wine needs no bush I need say no more in order to commend Mr. Mahon to your most favourable notice.

Mr. ROWE: I have great pleasure in seconding the motion. I have had great assistance from Mr. Mahon, and much pleasure in the genial company of my friend and colleague. I can testify to his worth from my own personal experience.

The resolution was adopted unanimously.

At the instance of Professor Macqueen, Mr. Butters was unanimosly re-chosen auditor, and Mr. Garry was, on the proposition of Capt. Blenkinsopp, appointed his colleague.

Thanks to the Retiring President.

Mr. PRUDAMES: I rise to propose a vote of thanks to our retiring President, Mr. Villar, for the able manner in which he has conducted the business of this Society, not only this evening, but generally during his term of office.

Vet.-Major KETTLE seconded the proposition, which was adopted by acclamation.

The CHAIRMAN: I thank you very much, and very fully appreciate your kind vote of thanks. I cannot help feeling that I really have not done as well as I ought to have done, but, as many of you will recollect, I was considerably handicapped in the early part of the past session by family matters. I think I may claim that the session has been a success. That fact, however, was not due to your President. It was due to gentlemen who kindly came forward with very valuable papers and very interesting specimens; and also to the gentlemen who have taken part in the discussions. Nor must I omit the arduous duties performed by our honorary secretary, Mr. Mahon, and our honorary treasurer, Mr. Rowe. I feel that your thanks are really rather more due to those gentlemen than to me. Nevertheless, I thank you very much for your kind vote of thanks.

The proceedings then terminated.

SOUTH DURHAM AND NORTH YORKSHIRE VETERINARY MEDICAL ASSOCIATION.

The seventh annual meeting was held on Friday, September 6th, 1895, at the North Eastern Hotel, Darlington. There were present Messrs. A. Peele, West Hartlepool; P. Snaith and H. H. Roberts, Bishop Auckland; W. N. Dobbing, C. G. Hill, and J. H. Taylor, Darlington; G. E. Gibson, Sedgefield; H. Peele, Durham; Professor Williams, Edinburgh; Jno. Gofton, North Shields; J. W. T. Moore, Newcastle-on-Tyne; and W. Awde, Stockton-on-Tees.

Mr. A. PEELE presided until after the confirmation of the minutes of the previous meeting (proposed by H. Peele, and seconded by P. Smith) when he vacated the chair in favour of Mr. P. Smith, the president-elect.

A hearty vote of thanks was then accorded to the retiring president for his conduct in the chair during his year of office, proposed by P. Snaith, seconded by W. N. Dobbing, to which Mr. Peele suitably replied.

Messrs. S. Fenny, M.R.C.V.S., Durham, and J. H. Taylor, M.R.C.V.S., Darlington, were then unanimously elected members of the Association, proposed by A. Peele, and seconded by W. Awde.

The TREASURER (Mr. H. H. Roberts) then presented his annual report, which was adopted, and the accounts still owing ordered to be paid proposed by W. Awde, and seconded by A. Peele. It showed a balance in hand of £11 7s. 5d., but there were outstanding subscriptions due to the Association amounting to £9 19s. 6d. which it was decided to leave in the hands of the treasurer and secretary to deal with before the next meeting and to report upon, so that some action could be taken if necessary.

Presidential Address.

Gentlemen,—The first duty that devolves upon me is to thank you for the honour you have done to me in electing me as your President. It is not without trepidation and doubt of my fitness for the duties, so ably and thoroughly carried out by our late president, Mr. Peele, and I ask you to help me to maintain the kindly and brotherly feeling of unanimity that has existed through the past year.

Before proceeding to the other business of the evening, I wish to draw your attention by a few brief remarks to matters directly relative to the veterinary profession.

A few months ago we received the Report of the Royal Commission on Tuberculosis. As all of you, no doubt, will have read the Report, it is sufficient for me to say that I am well satisfied with it, and that it more nearly represents my views on Tuberculosis than I myself could have expressed them. Therefore, having the Report before us, are we content to let it rest here? Most certainly not. Legislation is needed, and that urgently. When I tell you that a dairyman in our town exposed a milk cow in the public auction no later than Monday last, and that only 8s. was bid for her, you will all agree with me that it is a lamentable fact that we have no power to interfere. To my mind there is no agent or means so active in spreading Tuberculosis as milk. Two remarks in the Report impressed me very forcibly, viz.: "Tuberculous disease is observed most frequently in cattle and in swine" and "both carnivora and herbivora are susceptible and the proportion is high in pigs."

Well, gentlemen, during the few years that I have been in practice, it has been my lot to make *post-mortem* examinations of, perhaps, two or three hundred pigs, and although, whilst at College, I frequently saw the disease in swine, yet, since I left, with one exception, I do not remember seeing an undoubted case. But, curiously enough, that case only occurred in the beginning of last week. When you consider that these are mostly cottagers' pigs, fed mostly on meal and garden produce, and that they have no milk to give them, which in other districts and among farmers is more plentiful, you will partly see why I put so much stress upon milk as a source of contamination. I made enquiries with a view to finding out, if possible, the source of contamination in the case I spoke of, but was only able to ascertain that the pig was bought at a few months old from a small dairyman who bred it. Gentleman, I am not one who believes much in hereditary tuberculosis, and if you put to one side the cases that are congenital, I think the percentage is very small indeed.

But let us return to the matter of legislation. Do we use the powers we

have? Is the Milk Shops and Dairy Act properly carried out? Do the authorities take advantage of the powers conferred upon them to erect public slaughter-houses under skilled supervision? I say emphatically, no; and that the inspection of dairies is often a mere farce, whilst most of the boroughs neglect to adopt the public slaughterhouses. Is it fair to the rural population, which in this county is very large indeed, that they should be excluded from the benefits conferred upon their neighbours? At one time there were a great many difficulties in the way, but now, when every parish has its Council, I should insist on all milk vendors being licensed, and on a rigid inspection being made of all dairies with power to reject all cows affected with, or suspected of, tuberculosis. I should also insist on all meat being killed in a public slaughterhouse under competent inspection, and I do not see why such tuberculous meat as was deemed fit for food by the inspector should not be labelled as such in the same way as margarine is. Place it in shops expressly for the purpose if necessary, which shops should belong to the authorities. I myself would give compensation to the butchers, who, as the law now stands, are in a very unenviable position, the authorities taking the carcase and making the most of it. Perhaps some of you will say why not put tuberculosis under the Contagious Diseases (Animals) Act and make an end of the thing at once. Most certainly this should be done, but I do not think there is any likelihood of any very active measures being taken, especially as tuberculin has greatly multiplied the number of diagnosable cases, and I wish to insert the thin end of the wedge and push it home slowly and surely.

With reference to the alleged failure of the Board of Agriculture to cope with swine fever, I am not sure that we have grounds to say that they have failed. At any rate, the accusation will not hold good in this county. I do not mean to justify the appointment of a layman to the head of the Veterinary Department, for I hold that great injustice has been done to the profession, but at the same time I believe immediate slaughter and compensation to be the right method to adopt. There is no doubt that much more expense is incurred than is necessary. It seems a strange inconsistency that if a pig is alive it is left to the judgment of the local veterinary to say if it is or is not swine fever, and they accept his dictum; yet if a pig is found dead they must send the viscera to London. In my opinion only those cases which are considered to be swine fever should be sent to London. This would save much expense in time, cost of burial, carriage, &c. I do not see why the local veterinary could not carry out the duties now undertaken by the travelling inspector quite as efficiently and at much less cost.

The Royal College of Veterinary Surgeons have recently been considering two questions, viz., covering and notification.

With regard to covering, it is not a serious question for us if you except those cases where veterinary preparations are sold throughout the country, wholesale and retail, by firms, one member of which may have a qualification. In this matter something should be done if possible. It would be very hard to deprive the country practitioner of his unqualified assistant so long as they are only assistants and not partners. I would ask what becomes of all our students who fail to satisfy the examiners? Some of these return to their homes and are called by the neighbours "the vet." and "the young vet." and, often being in possession of a few recipes, and the little knowledge that is so dangerous, become in the habit of practising in a small way. These we must keep a tight hand upon, especially as they have proved themselves incompetent.

If we are to have notification of infectious diseases, what are they to be? It is already incumbent on owners to report all those diseases coming under the Contagious Diseases (Animals) Act, and acting under the advice of their veterinary, they generally do so. If they are determined to conceal the fact

of the existence of the disease, it can do no good to enforce it. It may be otherwise in the large towns, but to us as country practitioners, it is unnecessary, unless you are going to draw up a new schedule of diseases.

In conclusion, I may say that I have mentioned one or two reforms of measures which I should like to see developed, and if you are with me in these matters, much depends on ourselves. I do not expect that they will be brought about at once, but it rests with us and our sister profession to educate the public mind to the fitness of these things, and by perseverance and unity let us be the little leaven that shall leaven the whole lump.

A vote of thaks was proposed to Mr. Snaith for his address, and it was duly acknowledged.

A letter was read from the Scottish Metropolitan V.M.A., asking for the co-operation and support of the Association in their endeavour to induce the Coucil of the R.C.V.S. to lay before the present Minister of Agriculture the conclusion arrived at by the Royal Commission on Tuberculosis, and the danger to human health arising from the consumption of milk and meat derived from animals affected by the desease. That, in their opinion, bovine tuberculosis should be included in the Contagious Diseases (Animals) Act. That all dairy cows should be placed under veterinary supervision, and that among all suspected herds and dairy stock the use of the diagnostic test tuberculin under scientific supervision should be made compulsory. [The letter has already appeared in these pages.]

Mr. SNAITH proposed that a letter be sent to the Council of the R.C.V.S., asking them to accede to their wishes and lay the matter before the Minister of Agriculture, and that a letter be sent to the Scottish Metropolitan Veterinary Society, stating that this had been done, seconded by Mr. Hill, and carried unanimously.

Clinical Notes.

Mr. GIBSON stated that he had a case recently of acute gastritis in a mare which, on *post-mortem* examination, revealed the presence of 60 to 70 ascaris megalocephali in the stomach and duodenum. He also mentioned a case of malformation met with in a foal, in which milk came down both nostrils—the animal was rather thin in condition. On examination he found the soft palate was divided longitudinally.

Professor WILLIAMS stated that he had seen a similar case in a three-year old carting filly. She was, however, in good condition; but he was unable to advise any treatment for adoption in such cases as it did not seem to him to be feasible.

Professor WILLIAMS also mentioned another case of a horse which had rested for a day or two; when called he found both thighs immensely swollen, also over the ribs on the near side. Mucous membrane highly tinged, animal immoveable from the spot. Diagnosis, purpura hœmorrhagica, but internal temperature was only 95° F. In the afternoon very large swelling on near shoulder, temperature 107° F., purple spots on nose, and petechial spots on nostrils. Tried potass. chlorate and sodii hyposulphite for four days, but found the animal gradually getting worse, when he commenced intra-tracheal injections of iodine, 4 grs. of iodine to the ounce of pot. iodid six days in succession. Improved rapidly with this treatment. Considered that iodine was too volatile to obtain the same results by the mouth as could be obtained by intra-tracheal injections.

The SECRETARY referred to two brain cases met with recently. In the first the horse went round the box, but always in one direction. *Post-mortem* revealed two small tumours in the ventricles of the brain. In the other case the ear, eye, lip, and off side of face were paralysed. There was no power to elevate the tail nor to pass dung, which had to be removed by hand twice a day. At first the catheter had to be passed in order to take off the urine, but

after two or three days treatment she passed urine herself, but without the usual elevation of the tail. Treatment with nux vomica and tonics was tried for about a month, but little or no improvement was manifest, so had her destroyed. *Post-mortem* examination disclosed injury to the bones of the head on the off side.

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

THE quarterly meeting of the above Association was held at the Grand Hotel, Manchester, September 13th, 1895.

Tea at 5 p.m., business at 6 p.m.

Present: Mr. Wm. Dacre, President, in the chair, Professor Williams, Messrs. George Morgan, Liverpool; E. Faulkner, Alexr. Lawson, T. Hopkin, H. Hall, Lloyd Jones, J. B. Wolstenholme, S. Locke, R. C. Moore, E. H. Stent, and H. D. Chorlton, Manchester; J. C. Carter, Bradford; J. H. Carter, Burnley; R. Hughes, Oswestry; Wm. Woods, Wigan; E. E. Gubbin, Glossop; W. Ackroyd, Hebden Bridge; Jos. Hall, Oldham; H. B. Allen, Accrington; A. Munro, Altrincham; Wm. Hall, Royton; J. McKenna, Huddersfield. Visitors: J. E. Scriven, Tadcaster; A. Butters, London; R. M. Sunderland, J. Kerr Calderwood, J. R. R. Hamilton, A. O. Hughes, and R. W. Hadfield.

The minutes of last meeting were taken as read upon the proposition of Mr. J. H. CARTER, seconded by Mr. E. FAULKNER.

Mr. J. B. WOLSTENHOLME exhibited specimens of an ulcerated colon of a foal. Ulceration being due to immature strongulus tetracanthus.

The PRESIDENT said he had not seen anything of the sort.

Professor WILLIAMS said he had seen this condition in young horses 25 years ago. He had not seen it in foals in his life. He was of opinion that the worm had been brought from Iceland.

Mr. CARTER asked Mr. Chorlton if he adopted any treatment in the case of the foals, and if so what?

Mr. CHORLTON said that since the cause of the complaint was found out the ponies had received two drachm doses of turpentine each day, the small ones proportionate doses. The animals seemed to be improving under the treatment accompanied by a liberal diet.

Mr. HOPKIN stated he had been requested by Mr. Laithwood to propose that the undernoted resolution be passed by the Lancashire Veterinary Medical Association, and sent to the quarters he suggested:—

> "That in the opinion of the members of this Association it is highly advisable that, owing to the undoubted contagious nature of tuberculosis and great loss resulting to the stockowners of this country, and the admitted danger of its transmission to the human subject, the said infectious and dangerous disease should be included in the Contagious Diseases (Animals) Act, and that legislation is urgently required with the view to its extermination, and that a copy of this resolution be forwarded to Lord Salisbury, the President of the Board of Agriculture, the President of the Royal Agricultural Society."

Mr. ALEXANDER LAWSON seconded the proposition.

Professor WILLIAMS said some additional weight might be given to the resolution if it were sent to the Highland and Agricultural Society of Scotland which Society was similar to the Royal Agricultural Society of England.

The resolution was passed unanimously.

The PRESIDENT then called on Professor Williams to give his paper on some experience of surgical operations.

Professor WILLIAMS said the few observations he intended to make had little or no theory in them, but he hoped they would lead to a practical discussion. He gave his own views and experience of the ordinary operations

performed in veterinary surgery, and whether it was justifiable in continuing some of them or not, was a matter for the members to bring out of their individual experience.

As far as he could remember the first operation that he ever saw performed was one which was recommended in the older books, viz., that of taking up and tying what is now termed the zygomatic branch of the temporal artery. Periodic ophthalmia was a very common disease in his earlier days, and it was recommended that this blood-vessel should be taken up and tied in order to limit the flow of the blood to the eye and in this way prevent or cut short the inflammation which led to the formation of cataract. He remembered his grandfather performing this operation but there was no result, the inflammation of the eye went on as bad as before. Now he desired to point out that the operation by the old farriers was quite as rational as the bleeding from this vessel, recommended even at present for phrenitis because this artery had no more connection with the brain than it had with the eye, and he thought that even the old farriers were upon this point quite as correct as some practitioners of the present day. Regarding eye operations he had had during his experience about 15 cases of what was described as fungus hæmatoides, where the disease appeared as a red speck at the bottom of the eye, the latter becoming as large as a cauliflower, protruding from the orbit and bleeding upon the slightest touch. Thirteen of the operations had been performed on horses and two upon bullocks. In this disease his *modus operandi* was to remove the eye completely, and any diseased tissue remaining was destroyed. In horses there was a recurrence of the same, but in cattle they lived sufficiently long to be made fit for the butcher. He had noticed that in America at the present time they recommended in periodic ophthalmia that the aqueous humour should be let out, the result being pronounced good. As a matter of fact this was done by a Dublin veterinary surgeon named Ferguson about 40 or 50 years ago. The operation was in vogue in his (the Professor's) younger days—he had never seen it performed but had read about it—the result was a temporary improvement—periodic ophthalmia *was periodic ophthalmia* and it came again, and the only argument to bring forward was that there was a temporary improvement. Sir David Brewster made certain observations in cataract in the human being, and he said cataract was due to the absorption of fluid from the lens owing to the aqueous humour containing too much saline material, in certain conditions, viz., and in oldish people, and therefore abstracted the watery portion of the lens and that the latter contracted and became drier than natural, having somewhat the appearance of an onion when it is cut. It was well known that in an inflamed part the effusions of the liquids into it contain increased quantities of saline matters. By allowing this escape of the aqueous humour it is replaced by less saline fluid and in this way the thing may be delayed, but so far as his (the Professor's) remembrance went, the removal of the aqueous humour did not at all prevent the final blindness of the animal. He narrated the case of a Clydesdale horse which was brought to the veterinary college, the owner stating it had a maggot in its eye. There was certainly something like a maggot in its eye but it was not very distinct. He feared the operation the day the owner called at the College, but after applying cocaine to the eye he punctured the cornea when out came a maggot ¾ of an inch long and alive, the larvæ of some fly, but what fly he did not know; it was not an ordinary maggot generally found in decomposed meat, it was longer and finer. The horse did remarkably well. In all operations on the eye and in all operations where the veterinary surgeons do not want to use chloroform he thought the use of cocaine was most valuable, even in firing a subcutaneous injection of cocaine diminished the pain. Speaking of veterinary dentistry, and he had had a good deal of experience in it, he thought there were more cases of diseased teeth

amongst horses in Scotland than in England. He was of opinion, subject of course to criticism, that 99 cases out of 100 of chronic nasal gleet were due to disease of the tooth. In the majority of cases it was the fourth molar. As to the method of procedure in removing the diseased teeth he found it better to use the punch and hammer than the forceps. This direction of the tooth must be correctly laid down. He recommended this method of removing the molar teeth as being far better than the use of any key or forceps. Poll evil was seldom seen in Scotland. He had observed that dry dressing gave good results; he had found it was best to make a good incision exposing the whole of the diseased structures, to scrape the latter and to apply afterwards dry dressing such as boracic acid, oxide of zinc with starch. This application was excellent treatment. Open parotid duct. The portion anterior to the opening generally became obliterated in a very short time and it is almost impossible to reopen it. The best treatment was to inject the gland with the solution recommended by Percival and thus destroy the gland, the horse will do as well with one gland as with two. Respecting tumours in the front of the shoulder these are more prevalent in Scotch than in English horses as the collars in Scotland did not fit quite as well as those in England. In the old time he used to remove all these tumours, but he found small abscesses and that the tumour consisted of abscess walls sometimes cartilaginous and very hard and cut with difficulty. He found that if these tumours were not large it was quite safe to make an opening allowing the pus to escape, corrosive sublimate injected; the cases did perfectly well and the thickening disappeared. If large tumours then it was best to remove them, but the veterinary surgeon should never be satisfied until he had explored to the very bottom. If any pus cannot gain exit there the tumour will grow as rapidly as though it were of a malignant character. Coming to familiar operations first of all he might say that after the removal of large tumours, and when they had a large one from any cause, he found that a narrow tape $\frac{1}{4}$ of an inch in breadth made a first-rate suture. As to the treatment of splints he did not know how it was, but in the old time every horse that was lame in the forelegs was lame in the shoulder and the treatment was, both shoulders were blistered and very often a rowel put in the breast. The horse would improve; many got quite sound, under which treatment he could remember that after Turner, of Croydon, discovered navicular disease then every horse was lame in the foot and the latter was treated, setons were inserted through the frogs, and, after a time, many of the horses got better. It was, however, found that many of these horses developed splints, and that undoubtedly the lameness had been due to this cause. These splints were not always easily treated, the lameness often recurring over and over again. He was not going to refer to the ordinary blisters, firing, or setons; but to draw the members' attention to the method of scraping a splint. He stated he had never yet failed to get the horse to become sound after scraping a splint. He had had many horses recover which had resisted all treatment. In the course of a few days the swelling is larger than ever, and in course of time there is a splint bigger than ever; but, by-and-by, the horse becomes sound, and after the inflammation has subsided this enlargement gradually disappears, and in the course of a year there is not the vestige of a splint. He asked the members how they accounted for this? He accounted for it in this way—that in these chronic splints the bone is in a state of chronic inflammation; by scraping off the diseased bone an inflammation is excited of a more acute kind but of a reparative nature, and thus an acute inflammation, and a more rapid formation of reparative tissue is brought about. He stated that in cases wherever other measures had failed this method had proved successful in every instance, and he could conscientiously recommend it. Now we came to the operation of neurotomy in cases of ringbone, and in cases of

sidebone, very seldom had he seen cases where sidebone lameness seemed to be incurable. In case of ringbone and sidebone the operation of neurotomy had certainly done remarkably well. He was told by a Mr. Anderson that a ringbone would disappear after the neurotomy had been performed, and he found this perfectly true. About navicular disease the mistake was that the horse was worked sometimes for years, and finally becoming unfit for work, before the veterinary surgeon was asked to perform the operation, the result of which being satisfactory for a short time only. The cause of the breakdown is often a fracture of the navicular bone. The operation has been too long delayed—the bone has become brittle. He felt quite sure that if the operation was performed as soon as navicular disease had been diagnosed it would be much more satisfactory, and in many cases it would be found that the low operation did remarkably well. As to firing, it was a very cruel operation, and one that he thought should never be performed without due consideration. No horse should be fired except for a disease where it was thought the operation would prove to be successful. It stimulated a spavin, e.g., the repair, or the enlargement, or the ossification was not the cause of the lameness; it was the reparative material formed for the purpose of uniting the bones together (anchylosis). In some cases there are carious spots in the articular surfaces of the bones; in other cases the process of repair is simply by external union of the bones without there being a union of their surfaces. By firing, this process of repair was stimulated. In all bone diseases, where this reparative process was languid, he thought the operation should still be continued. Coming to a sprain of the tendons, they still fired. The lameness disappeared, but after a time the lameness returned, and the horse was fired again and returned to work. The majority, at least in the towns, became lame again. The question to be answered was, Were the veterinary surgeons justified in firing these cases of sprained tendon? In his opinion, they were not justified in firing a horse for sprained tendon. He got better certainly, but he would get better without that. He did not think the veterinary surgeon should persist in the operation. Tenotomy, he had to admit, was a failure. Unless the horse's limb could be put upon a splint, and kept there for about a year after the operation, he thought the latter was almost worse than useless. The question to be answered was, Were we justified in performing this operation? It was for the members to discuss, and say whether or not they agreed with him.

Quittor.

Having had much experience, he might be able to speak with authority on that point. He had seen all sorts of treatment, the use of various escharotics, corrosive sublimate, &c. He had witnessed all operations for quittor; but his experience was that if the depths of the sinus were measured, then the horn well thinned, and a depending orifice made with a pointed cautery to the base of the sinus, and exit thus given to the discharges, was by far the speediest and the most effective treatment of quittor. After the operation, syringe out and put a plug of tow in the lower orifice.

Operation for Sandcrack.

He thought reversed and shaped grooves on the sides of the crack at once prevented the opening and closing. He generally separated the horn from the coronet, and put on a blister. The horse would go to work in the course of a week or two, and would continue to work until the fissure had disappeared. Approaching a question which caused a considerable diversion of opinion was the scoring of the hoof for a side-bone. This was for the purpose of removing pressure from the ossified cartilages. He was sure his friends, Mr. Carter and Mr. Morgan, would remember that in their younger days the scoring of the hoof was a very common practice. This practice was recom-

mended by Coleman, Bracey Clarke, &c. He denied that the side-bone lameness was due to any pressure of the horn. So far as he knew, the lateral cartilages were situated above the hoof. The hoof did not press on the cartilages. Many Clydesdale horses had sidebones, but few were lame. This scoring or sawing of the foot was also recommended in laminitis, in order to allow the sensitive structures to swell—to expand as well as give exit to the exudation. Professor Dick recommended giving exit to this exudation by making a large opening at the toe when the animal was bled at that spot. Granted, theoretically, that the pain is relieved. What was the result? Even Professor Dick had to confess it—suppuration, and separation of the foot. Since bleeding of the toe was abolished, cases of horses casting their hoofs were exceedingly rare, He said that experiment had proved that septic matters, introduced into an inflamed area, would cause septic poisoning; not only a general septic poisoning, but would cause suppuration. Thus, the exposure of the inflamed structures of the foot, either by sawing or cutting through the wall or soles, rendered them liable to the action of septic germs, numerous in all the surroundings of horses' feet. As a consequence, suppuration occurred in the inflamed tissues, the horn became separated from the sensitive structures, and loss of the hoof was not an uncommon consequence.

The PRESIDENT thanked Professor Williams for the prompt and gracious manner in which he acceded to his request that he should read a paper at the meeting. Professor Williams has taken them a long way back, commencing with surgery in its infancy, and yet he told them that operations quite new at the present time, were performed by his great grandfather and others of that age.

Mr. MORGAN, who left early, thanked Professor Williams for his highly interesting and instructive address. It reminded him of old days to hear the old cures raked up. He agreed with the Professor as to the treatment of Quittor. He considered himself as fortunate in Quittor cases, and his was a rough and ready treatment. It was impossible to follow the sinus.

Mr. CARTER, of Bradford, said he had had a good deal of experience in Quittor and Poll-evil. He agreed with Professor Williams respecting the treatment of Quittor by a hot iron, but if the Quittor be towards the front there was no chance.

Mr. BUTTERS said he did not know that he could criticise Professor Williams' lecture, there being so much of it. He agreed very much with him in a great many of his remarks, except as to firing a horse for spavin, and thinking he had cut the nerve. With regard to operations for removing the molars in the upper jaw, certainly the Professor's method of procedure was simple, and it very soon removed the teeth; but in his experience of removing the upper molars there we not the same good results as removing the molars in the lower jaw—the food had a nasty way of getting into the sinuses. He said it had been a great pleasure to meet Professor Williams and the members, and to listen to the very interesting and useful address.

Mr. J. B. WOLSTENHOLME said Professor Williams' address ought to be a stimulus to the members. Regarding operations on the eye with cocain, it acted like magic. As to removing small tumours, he never had any trouble, Regarding shoulder tumours, he endorsed Professor Williams' remarks. He wished to express the pleasure he had derived in listening to the address.

Mr. E. FAULKNER: I am sure we all desire to heartily welcome our friend, Professor Williams, this evening, and particularly those of us who have had the good fortune to be taught by him. If an indication as to what he is thought of by the veterinary profession in this district were wanted, it is amply demonstrated by the large attendance here to-night, and, undoubtedly, his remarks will be of great benefit to all of us. Although unable to approach him in length of services, we must have had fair opportunities for observation

in our several practices, and now are placed in the fortunate position of being able to utilise the unique and interesting experience of the Professor, which has been long and progressive. Some of the operations referred to I have not witnessed, but there is one that was not mentioned which I particularly well remember, viz., the taking up of the vein in cases of bog spavin. That for specific ophthalmia I never saw, but had the good fortune once to be present when the Professor operated on a case of fungus hœmatoides, and these diseases, we now learn, are liable to recur after operation. As to cocain in minor operations, particularly on the eye, in this respect its use is most successful and of great service. I do not, however, care to utilise it hypodermically, having once had an unfortunate experience. We, however, regularly administer chloroform in major operations, and in the minor, such as firing neurotomy, &c., give an ounce of chloral hydrate twenty minutes before operating. In nasal gleet, occasionally, a troublesome and tedious case occurs that does not yield to treatment, and we suspect the molars. Although there is nothing definite in evidence, I have in such found, on extraction, the condition of the fangs described; and if unable to remove with the forceps, have resorted to punching out. As to poll evil and fistulous withers, generally, I quite agree that success attends bold surgery. The information as to treatment of open parotid duct, is certainly most useful, for although not often seen in general practice, I have known them difficult to treat. One sees a fair number of shoulder tumours in town, containing a small quantity of pus, with great thickening all round. I have at times extracted the pus by means of the aspirator, after exploration, and then injected tinct. iodine with success; and in others, after well blistering, laid them open, liberated the pus, and applied an escharotic to the interior of the tumour. The tape suture material we have used for some time past, and concur in the dry dressing treatment of wounds. My experience as to splints quite coincides with that of the Professor. It is a very frequent cause of lameness in light horses, not only in the young, but the more mature animal, and I think it almost impossible for one to know whether, in certain cases, a splint will cause trouble or not. In neurotomy, what we have heard is, I think, in accordance with our experience. The operation must be performed early, and with conditions otherwise favorable to its success. Of firing I feel warranted in saying it has its use and abuse. In certain cases it is undoubtedly of benefit, when applied early under suitable conditions and in properly selected cases amongst others of which I include sprained tendons and ligaments. It is abused when used without the least chance of benefit as I have seen in scores of chronic, ill-selected cases, under most unfortunate conditions. With the operation of tenotomy, success has followed with the fore-leg, but failure in the hind one. In Quittor, and the method of treating sandcrack, our practice, is that stated this evening, with slight modification according to circumstances. In laminitis, I have failed to satisfy myself on one point, viz. the presence of an exudate outside the tissues within a few days in an acute attack, for on carefully stripping the feet after death, there has been none present, although the sensitive tissues have been much swollen and discoloured. The dermoid cysts, mentioned by our president, it is our rule to lay well open and dissect out the internal secreting membrane. Mr. Faulkner proposed that the best thanks of the Association be given to Professor Williams for his kindness in being present, and giving them such an interesting and useful lecture delivered in so able and vigorous a manner, indicating that he possessesa master mind.

Mr. HOPKIN expressed his thanks to Professor Williams for his admirable address. Regarding sutures, he thought one of the mistakes generally made was that they were put too tight, no allowance was made for the swelling. Whether he used pins or anything else he always made allowance for the

swelling which took place. Coming to splint lameness, he got cases of leg splint where it was most difficult to get rid of the lameness. In firing for spavin, Professor Williams had related a case. He might remark that a similar one had come under his own notice, where a veterinary surgeon had treated the animal for the hip and it was running out at grass. He was a firm believer in not turning out to grass a horse suffering from spavin, and if they wanted to get rid of the lameness they should keep the animal up and raise the heels of the shoe. It took a certain amount of time, but his experience was that they would not get satisfactory results in the treatment of spavin if they turned the horse out to grass. The Professor had said that 19 out of 20 cases of nasal gleet were due to a diseased tooth. The worst cases he had had were those resulting from injuries to the bones in runaways, etc. Respecting sandcrack, he usually removed the horn after making the V shaped incision, the wider portion of the V towards the coronary band. He used to remove the two upper pieces, but recently he had left them in. He could not say that the cases had been quite as satisfactory. It was the cure of sandcrack if they removed them. He was glad to see the Professor and to thank him for his practical suggestions.

Mr. LAWSON said it was a great pleasure to him to listen to Professor Williams' remarks. Open parotid duct he thought was very uncommon. In all his experience he had only seen one case, he injected a solution of nitrate of silver and the face was swollen tremendously. After another injection it made a splendid cure. Splints: Professor Williams had referred to splints and he quite agreed with him that there were very few horses lame in the shoulder, but that the lameness was more often due to the splints. He had seen the scraping Professor Williams referred to performed several times, but the objection of it by the class of people he had mixed with, was that it usually left a mark. If it was a good horse, people object to blemishes and, of course, object to this operation. He believed if they would only give a splint time enough that the animal would get right without the application of fireirons, scraping, or anything else. With regard to neurotomy he had found in large towns it was a very useful operation, especially when he had got a lot of omnibus and tram horses. About sprained tendons, his experience was that in an old horse if it has sprained the back tendon it was scarcely any use treating it. On the contrary, if he had the opportunity of seeing the horse a week or so after it had sprained the tendon and if he fired then the case nearly always got right. As to laminitus or pumiced feet in large towns especially amongst heavy cart horses, they were very troublesome. He thanked Professor Williams most heartily for being present at the meeting. The address had been a very great treat to him.

Mr. LOCKE thanked Professor Williams for his admirable address and said he agreed with a good many things the Professor had stated. He also took the opportunity of thanking the members who had supported him in his position as a member of Council. He hoped he should be found able to do his duty during the years he had the pleasure of representing them.

Mr. MUNRO thanked the Professor for his very interesting and instructive address. As to sutures he had left them off altogether.

Mr. WM. WOODS.—As to the use of cocain being dangerous he used it regularly in firing horses. He injected about a drachm of solution in three or four different places in firing a tendon, and then with what was left of the solution he rubbed it on the leg with a tooth brush for two or three minutes, and ten minutes after that he commenced firing and there was no sign of any feeling whatever. He thanked Professor Williams for the interesting and useful address.

Mr. HUGHES wished to express his indebtedness to Professor Williams for the very instructive address.

Professor WILLIAMS said he should like to give an answer to one thing Mr. Faulkner said—that "in cutting" until there was a separation of the lamina, it was impossible for there to be a great amount of exudation. There was no space for it, but he stated he had specimens in his possession where the space was nearly half-an-inch in width between the wall and the pedal bone, containing nothing, the fluid exudate having escaped, and in the cases which terminated fatally, it would be found that there is excessive congestion of the great vessels, the blood coagulated within them so as to present a solid appearance. He was sorry that he could not assist Mr. Lawson in curing pumiced feet. He thanked his hearers very much for their kind vote of thanks and for the hearty manner in which they had received it.

Mr. E. FAULKNER proposed a vote of thanks to Professor Williams for his kindness in delivering such a talented address.

Mr. ALEXANDER LAWSON seconded.

Mr. LAWSON proposed a vote of thanks to the chairman.

Mr. E. FAULKNER seconded.

H. D. CHORLTON, *Hon. Secretary.*

MIDLAND COUNTIES VETERINARY MEDICAL ASSOCIATION.

THE quarterly meeting of the Association took place at the Grand Hotel, Birmingham, on Tuesday, August 13th, Mr. Wartnaby, Burton-on-Trent, presiding. There were also present—Messrs. Blakeway, Malcolm, Byner, Wilson, Birmingham; Green, Chambers, Dudley; Crowhurst, Leamington; W. Carless, Stafford; Beddard, Wolverhampton; Gooch, Stamford; Prickett, Walsall; Smith, Tunstall; Barling, Ross; Collett, West Bromwich; Kidd, Melton Mowbray; and H. J. Dawes, hon. secretary, West Bromwich.

Letters of apology for inability to be present were received from Professors Macqueen, McFadyean, Penberthy, Williams, McCall, Dr. Fleming, Messrs. B. Russell, T. Slipper, H. Olver, R. C. Trigger, W. S. Carless, F. W. Wragg, J. R. Green, and J. S. Barling.

The minutes of the previous meeting and the circular convening the present meeting were read by the HON. SECRETARY (Mr. H. J. Dawes), who also announced the receipt of acknowledgments from the relatives of the late Mr. Greaves, of Manchester, and the late Mr. Goodall, of Melton Mowbray, of the votes of condolence passed at the previous meeting.

Nominations and Election.

Mr. PRICKETT nominated for membership Mr. A. B. Forsyth, of Cannock.

The HON. SECRETARY (on behalf of Mr. John Blakeway, who was temporarily absent) nominated Mr. Simpson, of Maidenhead.

The HON. SECRETARY (on behalf of Mr. Carless, of Worcester) nominated Mr. Evans, of Stratford.

The above names will be submitted for election at the next quarterly meeting.

Mr. H. Kidd, of Melton Mowbray, was, on the motion of Mr. GOOCH, seconded by Mr. MALCOLM, unanimously accepted as a member of the Association.

Places of Meeting.

Mr. BARLING (Ross), in accordance with notice duly given, moved the following resolution:—"That all meetings of the Association shall be held in Birmingham, and the only exceptions shall be when the president, who may be resident elsewhere, shall desire to invite the Association to hold one meeting during his year of office in his own town." He said his only object was to

advance the welfare of the Association, and he thought the central position of Birmingham would enable them to obtain larger attendances.

The HON. SECRETARY begged to second the motion. He often received letters from members of the Association who could only attend Birmingham meetings.

Mr. GOOCH proposed as an amendment that the present rules remain in force. It was a question which cut both ways and some members could not attend because Birmingham was to them inaccessible. Besides, the more they moved about the district the more likely were they to rouse the interest of other members of the profession.

Mr. MALCOLM seconded the amendment being greatly in favour of the meetings being held in various towns.

The PRESIDENT supported the amendment. He admitted that the best meetings were held in Birmingham, because that was perhaps the most central town, but he had come to the conclusion that it was unfair to the outside members always to hold the meetings in the same place. Besides, it was quite open to them to hold every meeting in Birmingham if the majority of the members thought fit.

The resolution was negatived by an overwhelming majority.

New Tooth Shears.

Mr. JOHN BLAKEWAY exhibited a new pair of tooth shears, which he himself had just invented. He explained them in detail, and considerable interest was manifested concerning them.

Mr. CROWHURST gave formal notice that at the next meeting of the Association he should move that a pair of Mr. Blakeway's shears be purchased, and also that such further instruments be obtained as may in the meantime be considered desirable.

The HON. SECRETARY said he could personally testify to the admirable manner in which the shears worked.

Mr. BLAKEWAY said the shears were not in the market at present, but he was personally agreeable and would let the Association have a pair at the lowest possible cost.

Mr. SMITH said that the box in which the present tooth shears were sent out ought to be repaired as it was in a disgraceful condition. He moved that it be done.—Carried.

The Recent Visit of "The National" to Birmingham.

The HON. TREASURER (Mr. J. Blakeway) presented some accounts, relating principally to the expenses incurred through entertaining the members of the National Association on the occasion of their recent visit to Birmingham. They would, he said, be duly audited at the close of the financial year, but he wanted them to be paid at once—They were provisionally passed.

Mr. MALCOLM alluded to the reasonableness of the charges. Instead of their being heavy, as he for one fully anticipated, they were exceedingly moderate.

Mr. CROWHURST expressed himself in similar terms and added that several of the guests had declared themselves highly delighted at the hospitality of the Association.

This opinion having been endorsed by the remainder of those present,

The PRESIDENT, on behalf of the Reception Committee, returned thanks for the kind appreciation which had been shown of their efforts. They had been sufficiently rewarded by the success with which everything had been attended.

Another Acknowledgment.

Mr. BEDDARD said he desired to thank the Association for supporting his candidature for a seat on the Council of the College, and he could assure them that as long as he retained the position to which they had been good enough to elect him, he should endeavour to do his duty and attend the meetings regularly. At the present time there were no questions of vital importance engaging their attention, but he hoped at the end of his term of office to be able to leave a favourable impression and deserve a continuance of their confidence and support.

Mr. W. Carless, M.R.C.V.S., Stafford, read the following paper on

"DISTEMPER IN THE DOG."

Mr. President and Gentlemen,—When our much respected President asked me to read a paper before the Midland Counties Veterinary Medical Association during his year of office, I felt very much complimented, because I knew that he had only to make the request to many more capable members, as well as honorary associates, to obtain a paper or address of a much more interesting and instructive nature than anything I could produce. I decided that I would step out of the beaten track, and try to provoke a discussion on a subject that is a very important one, although not fostered or taken up by many members of our profession. That subject is "Canine distemper" or "Distemper in the dog."

When we take into consideration the enormous sums that are paid for dogs now, as compared with twenty years ago, and the great value that is placed upon them as progenitors and prize winners, both at home and abroad, and the great dangers they are exposed to in travelling and at exhibitions, I think it behoves us all to be well up in the detection and treatment of that very contagious and fatal malady, distemper.

Professor Williams defines arslupe as a "febrile disease," due to the operation of a morbid poison, occurring spontaneously from ordinary causes of disease, or as the result of contagion and infection, and known in almost all parts of the world. I cannot agree with the worthy Professor that it occurs spontaneously, simply because I have, during a close observation extending over thirty-five years, never seen a case which could not be traced to contagion or infection; of course I do not allude to a case that is brought to a show, or from a distance, because we should have no opportunity of tracing that to its origin, but keen observers will have noticed the fact that for two or three years a district will be free from the disease, although the number of dogs, young and old, remains the same and the surroundings as usual, when at last some travelling showman's or a lodger's dog comes to reside in the district for a day or two, and leaves behind him the virus of the disease.

The disease, in my opinion, may be more fitly described as a "Specific catarrh of the mucous membranes," affecting primarily those lining the air passages, fauces, and stomach.

Unfortunately, we have numerous and often very fatal complications. At least four of these are well described as the pneumonic, bilious, enteric, and nervous; any one of which is sufficient to kill, even when the best care and treatment is adopted. Now, why should we have these complications? I believe that most of them are due to bad treatment or no treatment at all, with bad surroundings, and that if the simple form of the malady were properly treated, the complications would very seldom occur.

All kinds and breeds of dogs are equally susceptible under the same circumstances, but we find in practice that the better bred animal and the exotic are the most liable to fall victims.

Distemper in the dog, like measles in the human subject, gives a certain immunity which is not complete. I have never seen a second attack within a

year, but after that time I am not surprised to see it. The incubative stage of the disease is from three to six days, depending upon the age and vigour of the subject.

Besides the complications I have mentioned, there are numerous sequelæ to this disease which give the owner immense trouble. These are shedding of hair, with irregularity of growth for a long time, pustulous eczema, affecting the skin under the belly and inside the thighs, weak eyes, and sometimes ulceration of the cornea from debility, deafness, due to perforation of the drum or to accumulation of wax, &c. All these things require the greatest care and good management, or your patient will not be restored to his pristine state.

Symptoms.—The first noticeable symptoms are lassitude, with slight cough, the patient coughing nine to ten times in quick succession and ending in a reach or slight attempt at vomition. Shortly, we notice the animal has slight rigours, breathing quickened, mucous membranes injected, eyes watery, frequent blowing of nose (this does not amount to sneezing, and I do not recognise sneezing as a symptom) muco-purulent discharges from nostrils, tongue dirty, with thickened mucous membrane about the throat, temperature high, with scanty urine, and irregular action of the bowels, appetite capricious, and when induced to take food is nearly always sick. This state of things will continue for some days, after which the poison will show signs of exhausting itself, and the patient point towards recovery, or some vital organ will be affected, and some one of the complications will appear. Putting these in rotation we will first consider *Pneumonia.*

This generally begins as bronchial pneumonia, and is ushered in with increased lassitude and prostration, a very painful cough, and the discharge from eyes and nose less. The animal will sit on its haunches, or loll against the wall until from exhaustion it falls on to its side and lies at full length, the extremities are cold, and the lips have a blueish tinge, with bloody discharge from nose.

I am of opinion that this form of the disease is nearly always through want of proper management, or from obesity. We seldom see it in kennels where a competent person is in charge, but more frequently in the lady's pet, which is stoved up in a high temperature and wrapped in rugs, and two or three times a day taken out into the cold for natural reasons.

Bilious.—This, in my opinion, is due to the thickened condition of the mucous membrane lining the biliary ducts, obstructing flow of bile into bowels and causing absorption into circulation. I feel sure that we may sometimes trace it to exposure to damp during the incubative stage of the disease, and congestion of the organ as a consequence. These cases are nearly always fatal.

Enteric.—This form is nearly always traceable to septic mischief, either from the decomposition of food, given indiscriminately, or from the licking into the mouth discharges from skin and nose, &c. The mucous membrane of the bowels soon becomes diseased when the system is so prostrated, and if not arrested the disease becomes pustulous, or ulcers may form giving rise to hæmorrhage. I consider this is a complication that is most amenable to treatment.

Nervous.—This is by far the most dangerous and fatal form, because when it begins the animal is so prostrate. We are often congratulating ourselves that the patient is making a good recovery, and are told by the nurse that "doggy is so much better to-day that it notices things and has taken a little food, and that there is not so much nasty discharge from the eyes and nose," but when we come to have a quiet look we observe some very tell-tale twitchings about the muscles of the forehead or face; these are the premonitory symptoms of epilepsy in distemper, and, if not combated at once, the patient either dies in great agony, or is left the subject of partial paralysis, or

of chorea. No breed of dog is exempt from this form of the disorder, but I have noticed that some breeds are more troubled than others, the collie, the setter, and the pointer being the most frequently attacked. Professor Williams says that convulsions of varying intensity, coma, paralysis, more or less complete, occur as primary symptoms. This, in my opinion, is wrong, as we never see brain disturbance in the first stages, unless it results from teething or the presence of worms in the bowels. The pathology of this form of the infection is the most obscure. We may know what the exciting causes are, such as over-feeding, or over-exertion during convalesence, but we do not know the exact condition of the brain and nerve centres immediately before the attack.

(*To be continued.*)

ADDRESS TO THE STUDENTS OF THE GLASGOW VETERINARY COLLEGE.

BY PROFESSOR MCKENDRICK.

THE formal opening of the Session 1895-6 of the Glasgow Veterinary College took place on Wednesday, October 16th, when Professor McKendrick, of Glasgow University, delivered the opening address. Mr. John M. Martin, Auchendennan, presided, and there was a large attendance, including Professor Owen Williams, Edinburgh, Professor Limont, the Rev. David Watson, and Bailie Graham.

Gentlemen,—Principal M'Call has asked me to address you on the occasion of the opening of a new session, and I need hardly say that I accede to his request with great pleasure. For many years I have taken an interest in the veterinary profession, from the time, over twenty years ago, when I lectured on physiology at the Royal (Dick) Veterinary College in Edinburgh, down to the period, from 1888 to 1894, when I acted as an examiner in physiology to the Royal College of Veterinary Surgeons. It has therefore been my good fortune to watch the progress of the veterinary profession during the last twenty-five years, to note the great changes that have taken place in the education of the veterinary student, to observe the increasing importance ot veterinary inspection as a branch of preventive medicine, and to recognise the valuable additions made to medical science by veterinary physiologists and pathologists. I shall venture, therefore, on this occasion, to make some observations on these points, in the hope that I may be able to awaken your interest in the profession you have chosen by showing you what it is, how it has come to be what it is, and what are its duties and responsibilities to the public at large.

Medicine, or the healing art, in the broadest sense, deals with the diseases affecting living beings. All living beings, whether plants or animals, are liable to certain accidents and to certain diseases. When we closely examine the life-history of any living thing, we soon find that it has to maintain a struggle against many inimical conditions, and that other living things of a parasitic kind prey upon it. This is true of the humblest plant and of the infusoria of microscopic size that inhabit a drop of stagnant water, as well as of the tree of the forest, of the domestic animal in all his strength and beauty, and even of man himself. It is the function of medicine to aid the living being in this struggle for existence. This is the most comprehensive view of the art of medicine, and it is well to familiarise your minds with it from the very outset of your studies. It will show you that the distinctions we make of medical science as applied to plants, and to the domestic animals, and to human beings, are artificial ; and whilst they may be convenient in practice; they have no basis in fact. The processes going on in all forms of life are essentially of the same kind. This statement is true, not only of physiological processes, but also those spoken of as pathological.

It is curious to note how the human mind, in the acquisition of knowledge, varies in its methods. Science begins with the gathering of general ideas about things. The number of these accumulates until, by observing correspondences, the mind works out for itself general laws or principles that seem to it to be the regular forces. Then comes a time when there is greater specialisation, vast numbers of facts are gathered in, and around each department the mind constructs for itself artificial barriers. One branch of knowledge seems to be marked off from others by clear lines of division. Lastly, the mind again alters its method, and swings back to the clearer recognition of general truths. It is then seen that knowledge must be viewed as a whole; that the barriers we erected were artificial; and that throughout the whole range the essential phenomena are identical. In the history of medical science one can clearly follow these processes, and, at the present time, in the domain of biological science, the tendency undoubtedly is to take a broad and comprehensive survey of the whole field and to recognise that in the tissues of plant and animal alike we have to do with the same essential phenomena.

You have chosen as your vocation one department of the art of healing, inasmuch as the objects of your professional care will mainly be the domestic animals, but you will be engaged in the same kind of work as that which occupies the attention of practitioners who deal with human beings. The phenomena of disease are essentially the same in the two classes: the only difference lies in the value of the patient. I place this before you so as to give you a sense of the dignity and worthiness of your profession. If you have the same work to do (sometimes even more difficult work), as has to be performed by practitioners who deal with men, it follows that your education should be on the same lines and of a character as thorough and efficient.

Both human and veterinary medicine presents two practical aspects recognised by everyone, namely, curative and preventive. By curative we mean, of course, all the knowledge that helps towards the diagnosis and the treatment of disease. It does not imply that all diseases can be cured, because it is well known that, especially towards the close of life, the cure of the disease—that is—the complete restoration to health—is a physical impossibility; but we hold that it does imply the relief of suffering. The relief of pain can always be obtained, and I have often thought that this achievement, apart altogether from cure, is worth all the thought and labour that have been expended on medical science. But medical science is largely concerned in prevention; and here your branch of the profession has a highly-important part to play—a part that the public do not yet sufficiently recognise. It is becoming more and more evident that not a few of the maladies that are the scourges of the human race originate in the lower animals, and that if these maladies are ever to be stamped out, we will have largely to depend on the efforts of the veterinary practitioner. From this point of view the services you have to render to society can hardly be overestimated.

Education of the Veterinary Student.

After those general observations, perhaps you will allow me to say something regarding the course of education now required of veterinary students. I advert to this, not so much with the view of giving you information, because I have no doubt you have all studied the regulations of the Royal College of Veterinary Surgeons, but because I do not believe the public have any adequate knowledge of the course of study now followed by a student in a veterinary college. In the first place, after a fair preliminary examination, involving English, Latin, elementary mathematics, an optional language, and elementary logic, you will have to spend a year in the study of chemistry and elementary physics, biology (which includes elementary zoology and botany), and

elementary anatomy. This may be termed your training in general science. You should not regard this part of your work merely from a utilitarian point of view, because you cannot always connect this kind of information with the professional work in which you hope to be engaged. Nor should you look on these studies merely as methods by which your mental powers will be strengthened. The study of science will no doubt do this for you, but I have long held that the human mind is an instrument that can be trained and developed by many methods, and that no method has a great advantage over another. No; the real use of a scientific education, even of an elementary character, is to enable a man to know something about the world in which he lives, and something about the conditions of existence of the plants and animals that share this world with him. I hold that no man has been well educated who does not possess something of this knowledge. His mental faculties may be of the highest order, and these may have been strengthened and developed to their fullest extent by other studies than those of physical and biological science, but the absence of scientific knowledge will make it difficult for him to see the bearings of many questions in religion, philosophy, and social economics. One of the first conditions of a thoroughly healthy mental and physical existence is a recognition of the physical conditions under which we live. We should then be able, perhaps, to face some of the inevitable trials and disappointments of life with greater fortitude and composure, and we would be more likely to come to sound conclusions as to the proper treatment of others. A scientific education would also enable men to appreciate better the gains to be expected from the applications of science to technical pursuits. Our country is undoubtedly behind in this matter, and our manufacturers, especially in the chemical industries, run the risk of being driven out of the field by the far-seeing Germans if they do not bestir themselves. It is a suggestive question as to how far this failure to appreciate technical science, so evident even among our politicians, and certainly among our manufacturers, may be due to the somewhat one-sided education that has been given to the so-called educated classes in this country.

Having laid the foundations of general scientific knowledge, you will then pass on to the study of anatomy and physiology. In the first year you will have acquired the rudiments of anatomy, including the bones, ligaments, and joints, and you will now study more in detail the muscular and visceral anatomy of the horse, ox, sheep, pig, and dog. Your attention will, of course, be chiefly directed to the anatomy of the horse, but you will receive in reality a course of instruction in comparative anatomy. Along with this will run a course of study of physiology. These two departments of knowledge, anatomy and physiology, undoubtedly form the basis of all your future work, and I would strongly counsel you to be unremitting in your endeavours to acquire knowledge in the dissecting room, and at the practical demonstrations in histology and in physiology. While you must read books, try to get your information at first hand, and you will find that this kind of information will never leave you. Cultivate the habit of looking at the horse, for example, with the anatomical and physiological eye, so that you see his parts and follow his processes of nutrition and innervation as if he were semi-transparent. A knowledge of what may be called surface-anatomy, and the relation of parts of the skin to underlying organs, is of great value, and I believe it is too much neglected. You will be introduced into a wonderful region when you enter on the study of physiology, and you will find that your knowledge of physiological processes will link itself on with your studies in pathology. No one can enter on pathological questions without being well grounded in physiology. You will see, as you go on, that anatomy, or a knowledge of structure, physiology, or a knowledge of function, and pathology, or a knowledge of these processes that we regard as morbid, are only sections

of the same science. As I have said, your studies in physiology will be specially interesting. Not only will you learn about life, the formation and functions of tissues, and the general processes of nutrition, innervation, and reproduction, but you will be brought before special problems met with in the animals you have to study. The functions of the parts of the horse's hoof, the process of digestion in the horse, the marvellous process of rumination in the ox, are all special subjects of study. I know of no mechanism more wonderful than the foot of the horse, with its arrangements for distribution of pressure, and for nutrition. You will receive a wider view of physiology than is often presented to the student of human medicine, as your range will be more comparative and less special.

(*To be continued.*)

THE NATIONAL VETERINARY BENEVOLENT AND MUTUAL DEFENCE SOCIETY.

THE eighteenth general and fifth annual meeting of the Society was held at the Grand Hotel, Aytown Street, Manchester, in September last. Geo. Morgan, Esq., in the chair. Present: Messrs. E. Faulkner, T. Hopkin, A. Lawson, A. L. Butters, J. B. Wolstenholme, J. S. Carter, J. E. Scriven, A. L. Jones, H. Chorlton, J. Hall, J. K. Calderwood, and the Secretary.

Minutes of the last annual meeting were read and confirmed.

Letters of apology for non-attendance were read from Messrs. J. Clark, A. W. Mason, R. Reynolds, J. Abson, and A. J. Maccallam.

ADDRESS BY MR. G. MORGAN.

Gentlemen,—You are all well aware of the cause that places me in the chair on this occasion. Since our last annual meeting death has been busy in our ranks and some of our oldest and truest friends have fallen by the way. Amongst the rest two of our principal officers have been removed, and this annual meeting has been called a little earlier than usual so that these gaps may be filled up and the work they loved carried forward for the good of the profession. Closely connected as I have been with this Society since its commencement, now 30 years ago, you will believe me when I say that personally I have been much affected by the death of the President and Treasurer—they having all along been in the fore-front of the battle, sparing neither time nor money when they found that by the expenditure of either they could benefit the profession or extend the influence of the Society. Placed as they both were on the highest platform of the profession a fierce light beat upon them, yet that only revealed traits of the true gentleman, amiability, courtesy, and consideration for the feelings of others which endeared them to all with whom they came in contact; they were ever ready to hear and help the humblest. Mr. Taylor possessed, in addition, a gentleness of manner and a kindliness of heart around which the lives of his family must have been twined to such an extent as to make separation an agony. We shall all miss him greatly, but our loss must be swallowed up by a deep sympathy for the near and dear ones on whom the keenest edge of this deep sorrow has fallen:—

> Be not afraid ye waiting hearts that weep,
> For God still giveth his beloved sleep,
> And if an endless sleep He wills so best.

I do not intend to forestall the Secretary in alluding to the work done, or the Treasurer as to the amount of money in hand, but shall confine myself to a few general remarks on the past history of the Society and its prospects in the future. Thirty years ago in this city it was established, few of the

originators remain, at the close of five years we had enrolled 124 members; 76 of these are dead and others have resigned, so that of those who were members during the first five years only about 16 are now connected with the Society. When this Society was founded it had no funds, now we can boast of having nearly four thousand pounds, and it does seem strange that in a profession with upwards of three thousand members we should only number 165. If the funds go on accumulating they may in time become a hindrance in place of a help to the Society, and I would suggest that steps be taken to enlarge its borders as well as its responsibility. We have now in the profession some twenty veterinary medical societies, could not some scheme be devised by which these societies could be affiliated with this, and then entitle their members to the benefit of the benevolent branch, if not to the whole. I would suggest that societies affiliating with this Society should be represented on the Council by the President and Secretary for the time being, who should be representatives also for the district in which their society met. Of course the working out of this would require more consideration than we can bestow on it at an annual meeting, but if a suggestion can be entertained that the Council be empowered to consider the matter and present a report to the next annual meeting for discussion and adoption, or otherwise, I shall be very pleased to propose it, and in the meantime any proposals from outsiders will be favourably entertained. We are strong enough to assist all our own members, and are willing to help others, but we will not be told by anyone of them that we must do so and so. Thirty years' experience have told us that our rules are practicable and our Society a success, and although we may not have reached the sacred height of perfection our aim is in that direction and our motto "Onward."

The SECRETARY reported that during the year 12 new members had been enrolled, but as against that 12 names had been crossed out in consequence of arrears of subscriptions and death.

The Council have had two cases under their consideration, the first being a claim of over £60 which the Council, after due consideration, thought ought not to go to court, a small deputation waited upon the plaintiff, and the matter was eventually settled for £25 amicably to all parties. The second case is still in abeyance.

There has also been a good deal of correspondence with one or two other members in which claims are threatened, but by the firm stand made by the veterinary surgeons in question, having the full force of the Society at their back, cases have not been pressed, thus proving the need and usefulness of the Society.

We have as a body suffered great losses during the past year, several of the old and esteemed members having joined the great majority. I refer more especially to Mr. P. Taylor and Mr. T. Greaves, both of whom laboured most incessantly for the good of the Society for the last 30 years. At the last Council meeting a vote of condolence was passed to the relatives of the above-named gentlemen. We have now 160 members.

Mr. FAULKNER, the acting treasurer, reported that the subscriptions and entrance fees from January 1st to September 13th amounted to £79 3s. 6d., amounts owing by 34 members being £17 7s. Cash in bank (defence fund), £480 18s. 3d.; cash in bank (benevolent fund), £517 9s. 1d.; amounts invested (benevolent fund), £2,800. These accounts have been audited up to date in consequence of the death of our late treasurer, Mr. Greaves, but the usual yearly audit will take place at the end of the year, when each member will have a copy forwarded.

It was resolved that a letter be written to Professor Williams thanking him for accepting their nominee for a free studentship, and should be pleased to hear how the student in question is progressing.

After a discussion it was resolved that a small committee be formed to take into consideration the matter of finance and benevolence, and report to the next annual meeting.

The committee appointed were:—Messrs. W. A. Taylor, E. Faulkner, A. Lawson, and J. B. Wolstenholme.

The following officers were appointed for the year 1896:—

Patron—General Sir Frederick FitzWygram, Bart., M.P.

Trustees—Messrs. W. Whittle, T. Hopkin, R. S. Reynolds, and John Lawson.

President—George Morgan, F.R.C.V.S., Liverpool.

Vice-President—W. A. Taylor, Esq., F.R.C.V.S., Manchester.

Treasurer—Ed. Faulkner, M.R.C.V.S., Manchester.

Honorary Secretary—Sam. Locke, M.R.C.V.S., Grosvenor Street, Oxford Street, Manchester.

Council—J. S. Carter, Bradford; A. L. Butters, London; Tedbar Hopkin, Manchester; A. Lawson, Manchester; A. W. Mason, Leeds; R. S. Reynolds, Liverpool; J. E. Scriven, Tadcaster; Henry Howse, Lincoln; R. C. Trigger, Newcastle-under-Lyne; W. Williams, Edinburgh; J. B. Wolstenholme, Manchester; W. Woods, Wigan.

Auditors—Messrs. Butcher, Litton, and Pownall, Manchester; and J. Wolstenholme, Manchester.

SAM. LOCKE, *Hon. Secretary.*

THE MINISTER OF AGRICULTURE IN EDINBURGH.

THE Right Hon. Walter H. Long, President of the Board of Agriculture, paid a visit to Edinburgh on the 23rd October in his official capacity for the purpose of meeting representative bodies in connection with questions relating to his Department. At noon the right hon. gentlemen received a deputation from the Royal Scottish Arboricultural Society, when the views of that body upon various points connected with forestry were submitted. Later in the afternoon he was present at a conference of agriculturists from all parts of Scotland, when members of the Scottish Chamber of Agriculture and others discussed, among other matters, the amendment of the Agricultural Holdings Act and the scheduling of tuberculosis as a contagious disease. In the evening Mr. Long was the guest of the Chamber at a dinner in the Waterloo Hotel.

Conference of Agriculturists.

A conference promoted by the Scottish Chamber of Agriculture was held at three o'clock in the hall of the Highland and Agricultural Society, George IV. Bridge, in order that the views of the Chamber and of representative agriculturists from various districts of the country might be laid before the President of the Board of Agriculture on questions in which they were interested. There was a large attendance, many local agricultural societies having sent delegates to the conference. Mr. Long was again accompanied by Sir Jacob Wilson, director of the Land Department of the Board of Agriculture. The Master of Polwarth, president of the Chamber, occupied the chair, and among those present to meet the Minister of Agriculture were the Earl of Dalkeith, Sir Mark J. Stewart, M.P.; the Hon. Thomas Cochrane, M.P.; Mr. Munro Ferguson, M.P.; Mr. James M'Killop, M.P.; Colonel Dudgeon of Cargen, Mr. John Gilmour of Montrave, Mr. James Hope, East Barns; Mr. John Scott of Gala, Mr. John Clay, Kerchesters; Mr. John Speir, Newton; Mr. James Biggar, Grange, Dalbeattie; Mr. Andrew Hutchison, Beechwood, Perth; Mr. Scott Dudgeon, Longnewton; the Rev. John

Gillespie, Mouswald; Principal Williams, New Veterinary College, Edinburgh; Professor Wallace, Edinburgh; Professor Wright, Glasgow; Mr. Walter Elliot, Hollybush; Mr. James I. Davidson, Saughton Mains; Mr. John Mitchell, Fliskmillan; Mr. T. M. Skirving, Niddrie Mains; Mr. John Dobbie, Campend; Mr. James Macdonald, secretary of the Highland and Agricultural Society; Mr. James Wylie, secretary of the Edinburgh Agricultural Society, &c. The following agricultural societies were either represented at the conference or wrote expressing approval of its objects :—

Aberdour (New) Agricultural Association, Annandale (Mid) Agricultural Society, Arbroath Farmers' Club, Arran Farmers' Society, Avondale do., Banffshire Central Farmers' Club, Buchlyvie and Gartmore Agricultural Society, Cambuslang, Blantyre, and Rutherglen do., Carmichael do., Cumbernauld do., Clackmannanshire Union do., Cumnock (New) Farmers' Society, Dunoon Agricultural Society, Eaglesham do., Eskdale and Liddesdale do., Formartine do., Fortrose Farmers' Club, Forth Agricultural Society, Galloway Cattle Sales Association, Inverness Farmers' Society, Kintyre Agricultural Society, Kilmarnock do., Kirriemuir do., Lanarkshire Farmers' Society, Liddesdale Agricultural Society, Tarbolton Farmers' Society, Teviotdale (West) Agricultural Society, Bathgate do., Spey, Avon, Fiddichside Farmers' Club, Dumfries and Galloway Union Agricultural Society, Galashiels Farmers' Club, Fife do., Dalrymple Farmers' Society, Wigtownshire Agricultural Association, Stranraer and Rhins of Galloway Agricultural Society, Lower Annandale do.

The CHAIRMAN, before explaining the order of the proceedings, expressed their gratitude that Mr. Long had been able to come there and meet with such a large and representative gathering of Scottish agriculturists. It was the first official visit paid to Scotland by a President of the Board of Agriculture, and he hoped Mr. Long would not suppose that this large attendance implied that they in Scotland thought that the Board of Agriculture or the Government could do everything to remedy the difficulties under which agriculture at present suffered. They knew that after all the Government could not do everything, and that they must very largely rely upon themselves, but none the less they felt that there were certain subjects in regard to which the Government might be able to help them, and in regard to which they thought it desirable that information should be laid before the President of the Board of Agriculture. It was not proposed to discuss all the questions on which the Chamber of Agriculture had petitioned Parliament, because they believed that in regard to many of them the mind of the Government was probably made up already, and they knew that Mr. Long had ample information on many of the points raised. Among these questions, which he need simply enumerate, were the lending of money at a low rate of interest for agricultural improvements, railway rates, the marking of foreign meat, and the inequality of taxation. The last-mentioned was a very important matter, as they felt that the land at present bore a very unfair share of the burden of taxation, more particularly of local rates. He found in his own parish that the land was paying 2s. per £1 of local rates, which was a very heavy tax, and out of proportion to the general wealth of the country.

The SECRETARY (Mr. Isaac Connell) having read the list of societies represented at the conference, or who had written expressing approval of its objects, the CHAIRMAN said that list would show that the objects of the conference met with the general concurrence of agricultural societies throughout the length and breadth of Scotland.

Principal WILLIAMS, of the New Veterinary College, Edinburgh, spoke first on "Tuberculosis."

Without discussing the fact of the transmissibility of tuberculosis from cattle to various other animals and to the human being, and not disputing the

conclusions founded upon most reliable data that, during the last 30 years or so, it has increased to an alarming extent amongst the cattle of this and other countries, one is compelled not only to ask the Government to deal with it in terms of this motion, but also, how is the evil to be entirely suppressed without an immense expenditure of money.

Is it to be dealt with like pleuro-pneumonia, by the slaughter of all diseased and all incontact animals, or are we to follow and take a lesson from Denmark, and endeavour gradually to eliminate tuberculosis without having recourse to such a costly measure?

It will be remembered that in 1888, the Veterinary Department of the Board of Agriculture, presided over by Professor Brown, recommended to the Government that "Tuberculosis be included in the Contagious Diseases (Animals) Acts, for the purpose of slaughter and compensation, for the seizure and slaughter of diseased animals exposed in markets or fairs." These recommendations were not adopted, mainly owing to the then difficulty of diagnosing the disease in apparently healthy cattle, and to another serious difficulty, in compensating for the seizure and slaughter of pedigreed stock. The Committee went even further, and recommended that "to breed from animals known to be tubercular, should be made an indictable offence." This last recommendation would not be expressed at the present time, as I will prove to you immediately that the danger from this is not so great as was then supposed.

In 1890, a Royal Commission was formed under Lord Basing, and, partly through the death of the president, the report was not published until the spring of this year, 1895. The investigators, sad to relate, from the few data they had to go upon in the United Kingdom, were compelled to refer to the Continent for statistics, as to the prevalence of the disease, and where it has been closely studied and guarded against, and they testify in their report that no records exist to be compared to those supplied by Copenhagen and Berlin. For four years, 1890 to 1893 inclusive, the percentage of tuberculous animals found when slaughtered at the Copenhagen abattoirs for food, were 17·7 per cent. for oxen and cows; 15·3 for pigs, and only 0·2 for calves and 0·003 for sheep; at Berlin, 15·1 for cattle, 1·55 for swine, 0·11 for calves, and 0·004 for sheep. You will see from these statistics that the disease is rare in calves, and more rarely so in sheep. But England and Scotland have indirectly given valuable information upon this point, for in 1891, nearly 10,000 animals (of which only 800 were ill), were slaughtered under the pleuro regulations, 1,260, or 12¼ per cent., were found tuberculous. In Edinburgh, the percentage was much higher than this, for out of 300 slaughtered, 120, or 40 per cent., were found tuberculous. Mr. Speir will tell you what he heard about its prevalence in Ayrshire and Wigtonshire.

Unfortunately, the Royal Commission, after being so long before submitting its report, suggests no methods for dealing with the disease, but confines itself to pointing out the dangers to human life when tubercular meat and milk are consumed, without the meat being properly cooked and the milk heated to the boiling point, conclusions which were previously well known.

Seeing that there is such a high percentage of tuberculosis where, often, none is suspected, it would be a stupendous task for the Government to order the slaughter and pay compensation, and particularly so if the carcases were destroyed, even for diseased animals only, and if the incontact animals, as under the pleuro rules, were also to be slaughtered the compensation would be too great a task for any government to perform. The loss would, of course, be diminished if the carcases of those having local tuberculosis were allowed to be sold for human consumption. Tubercle being seldom found in the flesh, and the abolition of the unjust procedure followed out by some sanitary authorities, namely, that of seizing and destroying the carcases of all

tuberculous beasts no matter how pure and good the meat might be. This is a great injustice to the butcher who, according to present usage, has to bear all the loss besides running the chance of prosecution and fine, notwithstanding the many representations which have been made to have this custom altered.

Now you will naturally ask me for some suggestions as to how to deal with the question. A few years ago I would have told you that I could see no solution, that the diagnosis of the disease was an impossibility owing to its frequent presence without outward signs, but since the discovery and application of tuberculin, discovered by Koch, the detection becomes an easy matter, as proved by experiments in many parts of the world.

And with all due deference I beg to submit the following schemes for consideration.

1st. *For dealing with non-breeding cattle.*—When tuberculosis is suspected in an animal, it and all incontact cattle should be subjected to the tuberculin test, and that all in which the reaction followed, if in good condition, be slaughtered, and the beef if found fit after careful examination by a duly qualified veterinary inspector, be sold for human consumption. That the animal be valued prior to slaughter, and that the difference between the value of a milch cow and as beef be made up by the Government as in pleuro-pneumonia, or perhaps divided between Government and owner.

That all piners, wasters, reacting to the test, should be slaughtered and their carcases at once destroyed, no compensation being given, and that neglect to report such cases to the proper authority be considered an indictable offence.

That all animals in which the tuberculin reaction indicated that they were affected, but apparently showing no signs of ill-health, if not fit for slaughter, should be prepared for the butcher and slaughtered when fit, being in the meantime removed and isolated from those in which no reaction had taken place. That the healthy stock be again tested aud the same rules applied.

2nd. In dealing with breeding stock I can do no better than quote from Nocard who says, "all those engaged in agriculture in breeding, rearing. feeding or fattening ought to carry out each for himself the prophylaxis of the disease. Each of them is directly interested in it. The methodical use of tuberculin, by denouncing the sick animals at the outset of the disease, permits one to isolate them and to protect the sound animals from all danger of contamination.

As the young animals mostly escape the infection, breeding would not be seriously interfered with, and the vacant spaces would be filled in a few years. Of course, a farm once made healthy, ought to be protected from re-infection. To effect this, it would be sufficient to introduce into it no new animals without having them previously tested with tuberculin.

Professor Bang, of Copenhagen, has a similar scheme, and has, according to his last report, carried it to a successful issue. He proceeds as follows:—

The whole herd is tested with tuberculin, and thus divided into a healthy and a tuberculous section, which are separated from one another, and have separate attendants. The healthy section is tested every six months with tuberculin, and any animals which react are at once removed to the tuberculous section. Those animals of the tuberculous section which are obviously affected, are got rid of; but those which are apparently healthy, are kept and used for breeding purposes as long as may be convenient, and as they will generally be fattened for slaughter before the disease is far advanced, the total condemnation of their carcases as butchers' meat will not, as a rule, be necessary. The calves of the tubercular section are removed to the healthy section immediately after birth, and are fed for the first day on colostrum,

which has been heated to 65° C., 149° Fah., and subsequently on boiled milk, this boiled milk being from tuberculous cows.

At first these calves were kept in separate boxes, and only added to the sound section when they had successfully undergone the tuberculin test, but he now thinks that they may with safety be removed to the sound section immediately after birth, and wait till the time of the general half-yearly testing with tuberculin.

He relates the following experiment at the farm of Thurebylille:—In Zealand, he in May, 1892, tested the whole herd consisting of 208 head. Although they all seemed healthy, and there had been no special amount of infection suspected, 80 per cent. of the milch cows, and 40 per cent. of the bulls, heifers and calves reacted. While the herd was out at grass, the two sections were kept apart, the byre was thoroughly disinfected and divided into two parts by a wooden partition, covered on one side with felt. A separate staff was told off to look after each section, with orders not to go from one to the other. It was decided to test the healthy section twice a year, and the calves of the tuberculous section as soon after birth as possible.

In October, 1892, the healthy section consisted of seventy animals, of which seven reacted and were removed to the tuberculous section.

In May, 1893, the healthy section consisted of 103, of which ten reacted and were removed to the tuberculous section. After this, the isolation of the two sections was more vigorously enforced.

In October, 1893, the healthy section consisted of 107, of which one reacted.

In May, 1894, out of 122, two reacted.

In October, 1894, out of 119, one was suspicious, and in May, 1895, the healthy section consisted of 136, of which none reacted. The few animals bought during these three years were tested before being introduced into the herd. Most of the calves born during this period, were the calves of tuberculous cows, but none of them have developed tubercle, with the exception, perhaps, of one calf which, when tested when 6½ weeks old, gave a reaction.

These results seem to show that a healthy stock may be had from a tuberculous one by the simple precautions of separating the healthy from the infected, and boiling the milk of the tuberculous cows.

In carrying out these procedures, I think the Government might safely devote an annual sum of money to assist cattle owners in suppressing so great and increasing an evil as tuberculosis; and, being of opinion that the schemes are tangible and reasonable, I now beg to move that tuberculosis be included in the statutory schedule of infectious diseases, and that compensation be paid to the owners of cattle affected with tuberculosis when such cattle are slaughtered in the public interest.

Mr. JOHN SPEIR, Newton, Glasgow, in seconding the motion, expressed the view that they were indebted to the Royal Commission for proving to them the poisonous character of the milk from a cow infected with tuberculosis. Speaking of the tuberclin test, he argued that the Government should step in and compel farmers to adopt it, and give compensation for animals that required to be slaughtered. If they did not, those who had adopted the test would send throughout the country their infected cattle, and do more damage than could be calculated.

The motion was agreed to.

Mr. LONG said one or two speakers had made reference to the Government, of which he had the honour to be a member. Filling such a position as he did, it must be of inestimable advantage to him to be brought into such close contact with those concerns over which he had to watch and to protect to the best of his ability. He had noticed that in the course of the speeches which had been delivered one or two references had been made to the Government of which he had the honour at present to be a member, and he was very glad

to find that in one quarter of the room they were regarded as a very happy family of brothers. He would, however, remind the gentleman who made use of the phrase that although he had not exaggerated in the smallest degree the friendly and affectionate family relations which governed them as a Government, yet in the history of families in this country there had been occasions when even brothers disagreed as to the relative share each should have in the family property. Consequently it must not be taken as any indication of want of harmony on their part if any individual member of the Government could not act as if he were the sole member of the Government of the day. At the same time he had been reminded by one gentleman of a fact which certainly came to him as news, that the present Government were pledged to the hilt to remedy agricultural depression. That was a novel statement to him, and one not altogether devoid of interest. All he could say was that he hoped the present gathering had not been brought together under the impression that that was the condition of things in regard to Her Majesty's Government, because if so they had been brought there on false pretences. Her Majesty's Government had not pledged themselves to relieve agricultural depression, nor had they suggested that it was within the power of a Government so to do. The causes which had produced agricultural depression had been far too widespread, had been in existence far too long a time, and were due to causes far beyond the power of any Government to relieve by immediate legislation. What they were prepared to do was, so far as they could, to simplify the conditions under which the agriculturists of the country were called upon to prosecute their calling, and, if possible, to place them in a position which would enable them to carry it on a little more profitably than unhappily it had hitherto been. He needed not, in addressing an audience of practical men such as they, to preface his remarks by any observations as to the limits within which he was enabled to make any promises to them. He spoke, of course, his own views as the minister responsible for agriculture, but betore he could embody those views in a bill and present it to Parliament, he should require the consent of his colleagues, and therefore, until they as a whole had decided what would be the legislation that they should propose to Parliament and the steps they should take, he could only indicate as briefly as possible which were his own views, and tell them as clearly as he could what would be the course that he should be prepared himself to take. He would deal with the subjects exactly as they had been brought before him. The first subject—that of tuberculosis—had been referred to by two gentlemen, Professor Williams and Mr. Speir, who spoke upon it in very practical and brief speeches, as one of leading importance. He might remind them of the fact that, as the law at present stood, the Department over which he was called upon to preside had no right or power whatever to interfere to deal with tuberculosis. At present animals were not slaughtered by the Government for tuberculosis. The process which took place was that carcases when slaughtered and found to be diseased were seized because they were injurious to human life. The suggestion was that the Board of Agriculture should exercise the power which it undoubtedly possessed, and should include that disease in the schedule under the Contagious Diseases (Animals) Act. They had had views upon a variety of subjects. One gentleman, in seconding Sir Mark Stewart's proposal, reminded them that the amount of money which was placed at the disposal of County Councils for aiding practical education had been materially decreased this year in consequence of the inroads made on their local taxation by the demands for swine fever. That was a very pregnant remark, and was not to be lightly passed over; because that was to be the effect of adding to their compensation fund the enormous sum which would be required if they were to deal with tuberculosis in a determined manner, and pay compensation for all

those animals which it was proposed they should deal with? The suggestion of Professor Williams, coming from such a high quarter, would receive his careful and respectful consideration; but he himself had almost unconsciously indicated many difficulties in the way of such a scheme. An essential part of the proposal was that this valuable discovery of the tuberculin should be made use of by the State; that the cattle should be isolated, the unsound being separated from the sound; and that then they should proceed with the necessary corollary of gradual destruction and compensation, either paid in whole by the State or divided between the State and the owner. It was all very well to talk to the large farmer, with ample accommodation, about separating the unsound from the sound cattle; but in a country like this, covered with small farms, any attempt at such a system of isolation would be doomed to failure. He was not condemning this proposal. There could be no doubt that the prevalence of that disease formed a very serious element in the condition and health of the herds of the country, and there was no doubt of its infectious character and of its transmissibility to others by the food of the animals. It was a question of such serious import that no Government could pass it by, and he was at present engaged in most carefully considering whether it was possible for anything to be done, either on some such lines as were sketched by the mover of the resolution, or by establishing some tuberculin station and affording facilities for the trial of that great discovery, in order that there might be some small movement made in the direction of dealing with that disease. He hoped, however, they would not disguise from themselves the fact that to suggest payment of compensation for the slaughter that would be necessary if they were going to exterminate the disease by slaughtering the animals that were to be used for breeding purposes, was to open a very large question, involving a very large expenditure of money. It was a question upon which he was to confer with the President of the Local Government Board (Mr. Chaplin), and if they failed to satisfy the demands of the stockowners of the country it would not be from want of any desire on their part to do all that was possible in their interests. His friend Sir Mark Stewart had condemned the administration of the Swine Fever Act. But he would remind him that when Parliaresolved to deal with swine fever itself, instead of leaving it to the Local Authorities, new machinery had suddenly to be brought into operation and many inspectors appointed, and, no doubt, some mistakes had occurred at the commencement. The test of that policy, however, lay in its results, and he held in his hand the very latest returns, from which he found that in England the condition of things was by no means so satisfactory as could be desired, but in Scotland it was extremely satisfactory. It showed—The number of animals that had died of swine fever, none; the number of cases reported affected, 4; reported to be suspected but found free, 3; leaving only one case actually found to be infected. To pass from that to the suggestion which had fallen from Sir Mark Stewart, that the President of the Board of Agriculture should come every year and have a conference such as that, he might remind them that while he could not make any promise which would bind his successors, the experiment had been most agreeable and most helpful to him, and so long as it was his privilege to fill the position he now occupied, it would give him great pleasure to accept the invitation, if it was offered, to join in a practical conference with the Scottish agriculturists upon matters which interested them.

Chamber of Agriculture Dinner.

The dinner, at which Mr. Long was the guest, of the Scottish Chamber of Agriculture in the evening, took place in the Waterloo Hotel, Waterloo Place, and was attended by about a hundred gentlemen. The chair was occupied by

the Master of Polwarth, the president of the Chamber; the croupiers were Mr. Andrew Hutchinson, of Beechwood, and Mr. John Mitchell, Fliskmillan, Cupar-Fife, and among those present were the guest of the evening, the Hon. Thomas Cochrane, M.P., Sir Mark J. Stewart, M.P., Mr. James M'Killop, M.P., Colonel Wauchope, Sir Jacob Wilson, Mr. James Hope, Eastbarns; Major Sprot, of Garnkirk; Colonel Dudgeon, of Cargen; Principal Williams; Mr. John Clay, Kerchesters; and Mr. Isaac Connell, the secretary of the Chamber of Agriculture. After the loyal toasts had been given by the Chairman, Colonel Wauchope replied for "The Army, Navy, and Reserve Forces," and Principal Williams replied for Veterinary Science.

THE INTERNATIONAL AGRICULTURAL CONGRESS.

THE Agricultural Congress, which concluded its meetings last month at Brussels, was the third of a series organised by the International Agricultural Commission, founded in Paris in 1889, at the time of the Universal Exhibition. The Commission aims at prosecuting inquiries of general interest during the intervals between the congresses, and was able at Brussels to record, as one piece of work, the international convention as to the protection of birds useful to agriculture, which was held last June in Paris, and which it claims as the outcome of a resolution passed at its previous congress. There can be little doubt that, as the English delegate, Mr. Ernest Clarke, observed in his speech at the banquet of the congress, international gatherings, such as these, enable nations to better understand each other's methods, and contribute to the *entente cordiale* of agriculturists in different parts of the world. They afford occasion, moreover, for the summing-up of experiences in the papers and reports contributed to the sections, and these are of substantial value afterwards, in their printed form, for purposes of reference.

To a large extent a congress on agricultural matters must, however, necessarily take its tone and colour from the country in which it is held, and thus the *vœux* and resolutions of the sections at Brussels relate chiefly to matters which are distinctly Belgian in character. But to this general rule there were two exceptions of importance. In the section on the currency question, presided over by Count Kolowrat, of Bohemia, a remarkably able and comprehensive report by M. Allard, formerly Director of the Mint at Brussels, and an ardent bimetallist, was discussed with animation for two days, and at a general meeting there was only one speech—by M. Strauss, of Antwerp—in opposition to the following resolution:—"That all agriculturists in every country should use every means in their power to influence their Governments to invoke the meeting of an international monetary conference, and to assist such conference by their support, in order to establish a bimetallic international understanding, or, at least, to restore silver to its former monetary position; this with a view to arrest the agricultural crisis and the monetary crisis of depreciation in prices." This resolution was supported by speeches of representatives from Austria, Denmark, Russia, Roumania, and England (Mr. Granville Smith, one of the honorary secretaries of the Bimetallic League), and was declared carried, in a full meeting, with only one dissentient voice.

The other noteworthy feature was an address by M. Nocard, the famous veterinarian of Alfort, on the subject of tuberculosis, in the course of which he combated the theory of the hereditary character of this malady. For over an hour the learned professor held the audience spellbound as, without any notes and in clear and resonant tones, he expounded his views upon the subject. The resolution which he proposed, "That the systematic employment of tuberculin is the best means of securing the prophylaxis of tuberculosis," was accepted by the congress without dissent.

Amongst other subjects of general interest were several papers on agricultural credit associations, one by Dr. Petermann, the Professor of Chemistry at the Agricultural Institute at Gembloux, on the legal control of adulterations of feeding-stuffs, and one by Professor Leplae, of Louvain, on agricultural motors, in which reference was made to the rapidly-increasing employment of petroleum engines for farm purposes. A resolution of undeniable importance was one which recommended the organisation of a general inspection of meat sold for human food. It appears that such inspection is already in force in Belgium and works satisfactorily.

The International Commission, with whom rests the decision as to the place of holding future congresses, has practically decided to accept the invitation of Hungary to hold the next Congress at Budapest in 1896.

CONTAGIOUS DISEASES ANIMALS ACT, 1894.

COMBINED SUMMARY OF RETURNS for the five weeks ending 21st September, 28th September, 5th October, 12th October, and 19th October, 1895.

ENGLAND AND WALES.

Pleuro-Pneumonia.	Swine Fever.	Anthrax.	Glanders (including Farcy).	Rabies.	Foot-and-Mouth Disease.
None	*Slaughtered.* Diseased, etc. 9676 Died 1485 Suspected 193 Total 10,354	Fresh Outbreaks 23 Animals Attacked 27	Fresh Outbreaks 87 Animals Attacked 132	*Killed.* Dogs 38 Swine 1 *Died.* Dogs 10 Sheep 6 Horses 1 Total 56	None

SCOTLAND.

None	*Slaughtered.* Diseased, etc. 166 Died 15 Suspected 14 Total 195	Fresh Outbreaks 6 Animals Attacked 9	Fresh Outbreaks 2 Animals Attacked 10	None.	None

IRELAND.

None	*Slaughtered.* Diseased, etc. 174 Died 86 Suspected 395 Total 655	None	None	Dogs killed 44 Cattle ,, 7 Horses ,, 1 Swine ,, 2 *Died.* Dogs 3 Cattle 8 Swine 1 Horse 1 Ass 1 68	None

LOUIS PASTEUR AND HIS WORK.

BY ONE WHO KNEW HIM.

ONE of the greatest men of the day has passed away. Pasteur, the great scientist, is dead. Every medical man throughout the length and breadth of Europe will mourn his loss; for medical science owes much indeed to the illustrious *savant* who died on Saturday near Paris. Born in 1822, Pasteur was by no means an old man—indeed, he was only 73; but to look at him, and speak to him, he appeared 10 or 20 years more.

It was in the year of the great Exhibition (1889), that I had the good fortune to meet M. Pasteur. He was a little man, thick set, with an extremely clever head, and a very kindly expression in his eyes. Owing to a paralytic stroke a few years before, from which he had partly lost the use of one leg, and required to lean heavily upon a stick, he dragged one foot so badly that he could only walk slowly, and even then was quite lame. This same stroke had also affected his mouth, and it was sometimes a little difficult for a foreigner to understand exactly what he said. These two slight afflictions are what made him appear so much older than he was, for slow, deliberate speech is generally the acquirement of age. Added to this, he was a very quiet man, extremely reserved, and always led the life of a hermit. He never cared for society, and very seldom appeared in public; he lived in his suite of rooms in the institution, a comparatively poor man. His wants were very simple. Three daughters died, but one lived with him and his wife; while his only son, Jean Baptiste, is secretary to the French Embassy at Madrid. This partial paralysis was entirely due to overwork and overstrain, for during the years that he was leading up to his famous discoveries he spent long and anxious hours in the fœtid atmosphere of the laboratory; and only those who have worked amongst such experiments know the noxious gases that escape, the intense heat that is often required, and the long and strenuous watching that is sometimes necessary. Years and years of patient labour were at last acknowledged, and finally the marvellous "Institute Pasteur" was erected for this great man to continue his research work.

The "Institute Pasteur" is the most wonderful scientific laboratory in the world. The building, which is situated far from the fashionable world in the Rue Dutot, resembles in appearance a well-appointed hospital, being clean, light, and airy, with wide passages and large windows. One portion was set apart for the dwelling of this remarkable man of science, so that he literally lived in the midst of his work. The edifice was built for M. Pasteur by international public subscription, England being one of the few countries that did not subscribe.

The French State, which has always been noted for its appreciation of science, in the case of M. Pasteur held out an unusually generous hand, otherwise, probably, inoculation for hydrophobia might never have been discovered, for experiments are costly, and necessarily numerous, and M. Pasteur, not being a man of large means, if he had been hampered by the worry of expense at every turn, could never have accomplished such an enormous amount of research with such satisfactory results. So anxious was he for others to benefit by his experience, that his large laboratory contains fourteen tables, at which are found students of all nationalities and ages, from twenty-five to fifty, some of them men who have already made their mark in science. To these students no charge is made beyond the price of the materials they use; and every facility for scientific research is provided.

The laboratory is beautifully clean and well arranged, each worker having his large table fitted up with gas jets, washing, carbolic apparatus, chemical stands, cupboards, &c., while every kind of heating, freezing, water, or disinfecting machine is ready for use.

When one speaks of the Institute Pasteur, it is a mistake to imagine that it is an institution limited to the consideration of the rabies question alone, for, on the contrary, although the cure of rabies and cattle plague may be said to have been the chief objects of study, the bacteriology of every febrile disease affecting the animal kingdom forms part of the investigations conducted in the laboratory; consequently, it appeals to our wider sympathies, in so far as the welfare of all domestic animals are also considered.

As rabies is, perhaps, of most public interest, I will give a few statistics which originally appeared in "Murray's Magazine" from my pen regarding the fatality of this disease, with and without inoculation, which may surprise some of my readers. M. Pasteur, after his marvellous discoveries of germs of ferments and chicken cholera, turned his attention to the saving of human life; and as hydrophobia was not only a terrible disease, but one for which no remedy was known, he naturally set himself to work to discover its origin and cure. By stamping out or curing the disease in dogs he hoped to be able to lessen the danger to human life.

Many years of labour proved to him that by inoculation he could give the disease to, or cure it in, a dog; but it was not until July, 1885, that the experiment was tried on a human being.

The first patient was a small lad. He had been severely bitten in some dozen places—on the hands, arms, and legs, and his mother, a simple peasant, brought him from Alsace, and asked M. Pasteur to do the same to her son as she heard he "did to dogs to prevent their getting hydrophobia." Pasteur hesitated; but having procured medical advice, all of which concurred as to the impossibility of the child's recovery, he (not being himself a doctor) let his surgeons inoculate the boy, which operation was repeated fourteen times, on two occasions twice in twenty-fours, so as to accomplish the task as quickly as possible. The child has never shown symptoms of hydrophobia, though it is now several years since he was treated, and he is fast growing to manhood.

The large outer hall of the institution by eleven o'clock contained eighty-nine persons, composed of all classes, all nationalities, and all ages, who had come to be inoculated (free of charge), having previously had the misfortune to be bitten by some rabid animal. On the right hand of the hall is a regular office, in which every case, with all particulars, is most carefully registered.

The cases are divided into three distinct groups: 1st. Patients bitten by dogs supposed to be mad; 2nd. Patients bitten by dogs certified to be mad; 3rd. Patients bitten by dogs proved to have been mad by subsequent inoculation.

After the patient has furnished every possible particular, he crosses the passage to a small room on the left, where the inoculation is performed. There sits the operator, who is assisted by a doctor, a nurse, and a clerk, furnished with full particulars, and the number of each case.

The process is a remarkably simple one. A small hypodermic syringe, filled with the preparation, taken from a rabbit, is injected under the skin, the point of the instrument being no bigger than a wool needle. The operation is as trifling as it is painless, and occupies about five seconds. It is repeated on fourteen successive days, the dose being made slightly stronger each time.

So quickly is the inoculation accomplished, and with such system, that the eighty-nine patients on this occasion were all attended to in forty minutes, and had all left the hall in less than an hour, although several cases of bad bites required surgical dressing before being sent away.

That waiting room, had, indeed, presented a curious spectacle, as may be judged from the fact that, among the anxious-faced group, I had noticed a

little English girl, a French soldier, a Belgian fisherman, a German governess, a stately Arab in his flowing burnouse, together with some fifteen children, two or three of whom were babies.

After the death of any rabid animal (and many are sent to the institution), it is cremated in a proper cremating furnace, that the germs which have done so much harm during life may do no further damage after death. A dog with rabies may have many ways of manifesting its mania; some howl, others have a cross, sharp, and incessant bark, most are dejected and sullen at first, and all are more or less violent in the later stages of the disease. Most dogs as well as human beings have a horror of water in every form, either the sight, sound, or feeling of it throws them into convulsions. Some dogs die of paralysis without dread of water, but with an inability to swallow, as the efforts to do so always brings on a spasm of the gullet. Paralysis is in general the last act in the drama of rabies. At the Institute Pasteur many thousands of people have been treated for hydrophobia, and the enormous number of successful cases increases year by year, as the discovery becomes more perfected. One rabbit a day will inoculate about a hundred persons, so all the terrible stories one hears of thousands of rabbits being required is absolute exaggeration.

For years after such institutions had been started in Russia, Italy, Constantinople, Bucharest, Rio Janeiro, Buenos Ayres, Havannah, Chicago, Malta, &c. England refused to have anything to do with one. The anti-vivisectionists got up petitions to prevent one being started in this country, and yet at the very time, whenever a case of rabies occurred here, the patient was sent over to Paris by the Lord Mayor's Mansion House Fund, or some local authorities, in the case of policemen, postmen, or country labourers. They never paid one penny for their inoculation, because all such work was done free by M. Pasteur. So that actually at the time we were accepting his charity, and showing our approval of his wonderful researches by sending him patients, we were abusing him on this side of the Channel. We are a little more enlightened to-day; and now the virus can be procured in London at the British Institute of Preventive Medecine, as well as the anti-toxin for treatment in diphtheria.

The range of incubating periods, in persons known to have been bitten by really rabid animals, according to M. Pasteur, is as follows:

20	per cent.	manifest the disease in	30	days.
50	"	"	60	"
70	"	"	90	"
90	"	"	120	"

The longest incubation period as yet authentically known is one solitary case, where the symptoms did not appear till fifteen months after the person was bitten, thus showing the incubating period of rabies may be from thirty days to fifteen months, a very much longer period than is usual in other germ diseases, such as scarlet fever, whooping cough, typhus, typhoid, cholera, measles, or small-pox. People may be glad to hear that since Pasteur's cure and the muzzling order hydrophobia has been steadily on the decrease, and there have been no epidemics for some time; formerly it came periodically as a wave, like scarlet fever or measles.

Although the Institute Pasteur has lost its figure head, it will be carried on in exactly the same lines by Dr. Roux, who during the last few years had gradually taken Pasteur's position, as he has relinquished his work little by little. Dr. Roux was himself a student under Pasteur, then an assistant, and latterly one might say partner. Anyway, he is a most remarkable and capable man, and thoroughly competent to continue the work which has led, or is leading, to cures for hydrophobia, preventives for fermentations in beer, vinegar, etc., disease in the silkworm, the potato beetle, anthrax in cattle,

diphtheria, and consumption; indeed, in all kinds of diseases resulting from the establishment of the germ theory of disease.

THE FUNERAL OF M. PASTEUR.

On Saturday, October 5th, with all the pomp and ceremonial of a State funeral, the remains of Louis Pasteur were laid to rest in the stately church of Notre Dame de Paris. At ten o'clock, the cortége, about a mile in length, began to move towards Notre Dame, and arrived there about half-past eleven. All along the route, nearly two miles in length, the streets were densely packed by crowds of spectators, the number of whom was estimated at over three hundred thousand. The route was lined by police and military, but their assistance was hardly needed, so respectful and reverent was the enormous assemblage of people. The Chefs du Service Pasteur, with the representation of the French and foreign pupils of the Institute, was the first to enter the church. Then the coffin was carried up the nave, preceded by a procession of priests, and immediately followed by the son, son-in-law, and grandson of M. Pasteur. These were followed by the Ministers of State, the Ambassadors (among whom was Lord Dufferin), and the diplomatic bodies. After them came the Academy of Medicine, members of French Academy, representatives of the learned societies of France, of the students of French Universities of Industries, and the foreign representatives. Among these were Sir Dyce Duckworth, representing the Royal College of Physicians, London; the President of the Royal Agricultural Society of London, representative of the Royal Society, etc. The Chefs du Service Pasteur were all present, including MM. Roux, Chamberland, Duclaux Metchnikoff, and Trocard. Among the representatives of the pupils of M. Pasteur from abroad were Drs. Sukianoff, St. Petersburg; Bujwid, of Cracow; Denschmann, Berlin; and Hunter Stewart, Edinburgh. The Mass began when the President of the Republic entered, the whole service being grand and impressive. The Archbishop of Paris gave the absolution. The body was now removed to the great square of Notre Dame, and placed again on the catafalque. The President then left the church, accompanied by the Grand Duke Constantine and Prince Nicholas of Greece, and followed by the whole congregation. M. Poincare, Minister of Instruction, then mounted a rostrum draped in black, from which he pronounced the funeral oration. Addressing the assemblage in a clear, ringing voice, he with great dignity passed a eulogium on the late savant in terms which every one felt to be worthy of the great occasion. After recounting the services of M. Pasteur, he concluded as follows:—"Happy," said Pasteur, "happy he who carries in him an ideal, and who obeys it." He has all his life obeyed the purest ideal, the high ideal of science, virtue, and love. All his thoughts and all his actions have been lighted up by this internal light. He has been great in feeling as well as in intellect, and posterity will place him among the apostles of right and truth. Farewell, dear and illustrious master! Science, which you have so nobly served; science, immortal and sovereign, by you become more sovereign, will transmit to the distant ages the ineffaceable imprint of your genius. After the conclusion of the speech, M. Poincare descended from the rostrum amid a low murmur of applause, which showed how well he had interpreted the feelings of those present. For an hour the troops, to spirited music, defiled before the catafalque, in front of which was the President, with the Grand Duke Constantine and the Prince of Greece. At a later stage the coffin was removed to the Church of Notre Dame, there to rest till later it is buried in the grounds of the Institute, close by the bronze representing Jupille, the herd-boy (M. Pasteur's first patient), fighting with the mad dog that had bitten him.

THE HORSE-BOT.

Of the many insects that are associated in this country with the work of the farmer, not the least important is the horse-bot (*Gasterophilus equi.*) It is one of the insects that the farmer troubles himself about least, its ravages being, as a rule, less decidedly apparent than in the case of many other insects. It is a moot point, indeed, amongst agriculturalists whether the horse-bot is fatal to the horse or not. Experiments which have been carried on for some months by Mr. William Sim, Gourdas, Fyvie—a gentleman who is well known over the North of Scotland as a naturalist—tend to modify certain of the current notions regarding the bot. These parasites being in some number last season, Mr. Sim was well favoured by events for observing them, and the following details have been made out.

On a genial day about the end of summer, the female fly deposits her eggs on the hair of the horse—the fore-legs, flanks, and shoulders being the chosen parts. Those placed on the fore-legs and flanks are intended as guests for the animal on which they are deposited, but those deposited on the shoulders for a companion, so that one horse may be infected by licking or fondling its neighbour (as they readily do when on pasture, and when on friendly terms with each other) or by biting when in an idle, aggressive mood.

These eggs have always, hitherto, been supposed to be licked off by the tongue of the horse and then swallowed. Mr. Sim declares that this theory can no longer be held. They are so securely cemented to the hair, that nothing but a sharp knife or scissors can remove them. Last August several hatches of eggs, numbering from 50 to 150 each on various horses, came under Mr. Sim's notice, and, as a precaution to prevent them causing any injurious effects afterwards and for other purposes, the hair was clipped off with the offending ova the same day on which the ova were deposited. Each batch of eggs was kept separate, and carefully examined from time to time under the microscope. From these eggs the first bot made its appearance on the fifth day, thus proving conclusively that the eggs can be hatched apart from the horse, and that the accepted theory of the eggs requiring to reach the stomach of the animal before they can be hatched, is no longer tenable. From the same batch of eggs, all laid at the same time, and kept under the same conditions, they hatched out now and again a few every other day for twelve weeks. Eighty-four days thus passed between the birth of the first and the birth of the last bot, a small percentage remaining unhatched. This variation in time forms one of the most remarkable features of the horse-bot eggs, and in all Mr. Sim's experience, he does not know of a similar case.

The eggs were so sensitive to heat and moisture that a few whiffs of hot breath never failed to supply sufficient warmth to hatch out a few young bots whenever wanted. It is quite evident that some of the larvæ are hatched out and carried away in the horse's mouth at the time that he licks himself or caresses his neighbour. These pests begin their existence by pushing out an oblong valve or lid near the end of the egg, and protrude nearly their whole length, but they never leave the egg-case entirely, even although kept for weeks. unless they are roughly handled, neither can they draw themselves backwards into the egg again. But when touched with a drop of warm horse saliva they quit the egg at once and are all life and activity, only a low power being necessary to see the young bots wriggling about. At first the new-born larva is a tiny, almost invisible, lifeless-looking grub, cylindrical in shape, and consisting of fourteen segments, tapering from the fifth to both ends. Several curved hooks (not two only, as was hitherto believed) or spines project from the head. and are used by the grub to attach itself to the lining membrane of the horse's stomach. A double circle of bristles separate each of the first ten segments. The last or fourteenth segment is cleft in the middle, each half being turned

aside like the arms of an anchor for the purpose of fixing the larva in the egg, and preventing it from prematurely falling out, until circumstances occur to convey it to suitable quarters. The eggs themselves are of a dull white, and are quite visible on a black or brown animal, but not so easily detected when the hair is white. When better seen the egg is very peculiarly shaped. One end is rounded, and the other very mnch pointed, not unlike a miniature shuttle of a sewing-machine. The full fed bots reach the ground with the horse's droppings in the course of the following summer, and pass the other stages of their eventful life in common with other dipterous insects.

It is, as we have already mentioned, a disputed point whether the presence of these parasites has a baneful or wholesome effect on the horse. But it is certain that as larvæ they draw their nourishment from the inner membrane of the horse's stomach. They must consequently cause him a considerable amount of uneasiness and discomfort at least, and so, to a certain extent, must be of a hurtful nature. The best preventative against any harmful results is to clip off the eggs whenever seen.

Army Veterinary Department.

Death.—We regret to announce the death of Vety.-Capt. H. Wilkinson on the 7th inst., at Pietermaritzburg.

Arrivals.—Vety.-Capt. J. Finlayson, arrived on 9th inst., on completion of tour of service in Egypt. The undermentioned officers arrived from India on six months' sick leave of absence:—Vety.-Lieuts. C. B. M. Harris and W. J. Tatam.

Appointment.—Vety.-Lieut. R. H. Holmes arrived at Aldershot for duty on 15th instant, on appointment.

Transfers.—The undermentioned transfers have taken place:—Vety.-Lieut. W. B. Edwards, Aldershot to Woolwich; Vety.-Lieut. F. W. Hunt, Aldershot o Newbridge.

Extracts from Foreign Journals.

INTERMITTENT COLIC IN THE HORSE, DUE TO A CHANGE OF RELATIONS OF THE SMALL INTESTINE; CONSEQUENT RUPTURE AND DEATH.

M. Ad. Lucet contributes the following paper to the *Recueil de Médecine Vétérinaire* of 15th September:—

"On the 12th of April I was consulted about a three-year-old horse, in good condition, which had been suddenly seized with colic on the 6th, and had again on the 8th shown the same morbid symptoms. I was informed that on both occasions he had been seized whilst at work in the plough. The attacks had been very acute at the beginning, had gradually calmed down, and finally disappeared at the end of five or six hours. On both occasions the attacks had come on suddenly, without any warning; whilst they lasted the patient had shown no constipation, no diarrhœa, no inflation, and no interruption in the emission of urine. One curious feature of the attacks was that the horse would sometimes, especially when about to rise, assume 'the posture of a sitting dog'—so said the owner.

"On the 16th I was sent for to see the horse, which had been suddenly seized with colic, but before I reached him he had recovered, the colic had disappeared, and the patient was cheerful and beginning to eat again. I learned that since the 8th, the day of the former seizure, the appetite had not ceased nor even diminished, and everything that the animal had taken had been rapidly masticated and well digested. The fæces were normal, had no bad smell, and were free from false membranes, and never streaked with

blood. The pulse was normal, and likewise the rectal temperature; the heart-beats and respiration showed no irregularity. The abdominal walls gave no sign of being painful, the testicles were all right, and, finally, exploration per rectum gave no indication of anything being wrong.

"By way of laxative I ordered 200 grammes of sulphate of soda per diem. On the 19th, new colicky attacks occurred, but gave way rapidly under the action of 90 grammes of Lebas' elixir. Again the attacks returned on the 21st, but were of short duration. On the 23rd, by the owner's orders, the animal was purged with 90 grammes of aloes; this trial passed off all right, and from the 23rd of April to the 3rd of May the general condition of the animal remained good. On that day the horse, which had done no work since the purging, is put in the plough for an hour or two, and this brings on the colic again. I am sent for and arrive in time to observe the symptoms. The animal, looking anxious and dispirited, and with his face slightly drawn, is pawing the ground and twisting about. After a while he lies down with much precaution, rolls about once or twice, first on this side, then on the other, then stretches himself out at full length. After a few moments of repose he lifts his head again and gazes at his flank, then begins to roll again, or, stretching out his fore-legs in front of him, he raises himself up and assumes the position of the sitting dog, just as had been reported to me. After this he gets upon his legs or he falls over on his side. There is no attempt at vomiting and no inflation. Defecation and micturition are normal, heart-beats 55, and temperature per rectum 38·7 Centigrade. A dose of Lebas' elixir is administered and gradually the abdominal pains disappear; the patient rises and remains standing, gives himself a shake, and begins to nibble his food.

"I diagnose an intestinal lesion of slow growth (tumour, abscess, or strange foreign body), and I warn 'the owner of the probable impending death of the animal by rupture of the intestine. He at once declares his intention of getting rid of the horse, and proposes to fatten him or at least bring him into good condition for one of the fairs held in the neighbourhood.

"Apart from the colic attacks the horse seemed to enjoy good health, had an excellent appetite, and, on the whole, had not lost flesh. The owner, therefore, hoped to get him into condition for sale, and what follows confirms this expectation, for the animal soon arrives at a satisfactory state of plumpness, in spite of successive colic attacks on the 10th, 12th, 17th, and 23rd of May—these attacks being identical in their symptoms with those that had preceded them. On 30th May the horse is put to very easy work; colic comes on; horse is unharnessed and walked up and down, and then placed at liberty in a large stable. For some time nothing beyond the usual occurs, then all at once cold sweats break out in the breast and in the region of the sheath. Gradually these extend and become generalised; the face is contorted and the pains diminish in intensity, or rather the patient is no longer able to struggle against them, and death supervenes. I make a *post-mortem* examination without delay.

"The only interesting lesions are in the abdominal cavity; as soon as it is opened, a gush of muddy liquid escapes, of a slightly arid odour, holding in suspense a lot of particles of food. After this liquid has run out, the ventral walls are entirely removed, and all the intestinal mass, thus exposed to view, is seen to be stained by agglomerations of herbaceous food spread all over. The peritoneum is the seat of pretty severe congestion. Here and there on the large intestine and its membranous attachments there are congestive patches of varying extent. All these are of secondary origin, and the principal lesion has its seat in the middle of the floating part of the small intestine; it consists of a rupture big enough to allow a hen's egg to pass, with regular rounded edges, as if a foreign body, lodged in the intestine, had acted on it slowly and progressively. Still, nothing comes to confirm this

hypothesis, and in spite of careful examinations, I can find nothing to justify a belief in the existence of such a body. The oval opening which had been formed on the lateral wall of the intestine, shows at its widest part a length of six centimètres (about 2½ inches), at its narrowest four centimètres, and it had been formed by loss of substance; it is, in fact, impossible to bring the two edges together and place them in contact. In addition, it is enveloped and almost concealed by the mesentery, which is very much inflamed. On its level and forwards for a length of 25 to 30 centimètres (9 to 12 inches), the intestine, greatly distended and with thickened walls, has an enormous sausage-like appearance, being red and irritated, and having a circumference of 23 centimètres in its thickest part, which corresponds to the rupture. For seven to eight centimètres of its length it is involved in the mesentery which surrounds it completely, and is fixed there by numerous bands of loose tissue of recent formation. Behind this opening the same mesenteric 'sleeve' still exists for a length of 5 to 6 c., and then abruptly terminates in enormous congested pads, black in colour, whence emerges the posterior portion of the intestine, much less irritated and not so wide, being only 6 c. in circumference but not obstructed. The part of the mesentery left free above this intestinal lesion is over a great part of its surface, congested and blackish, and shows its vessels voluminous and turgid.

"This rupture seems to have had for its primary origin a strangulation produced by the mesentery, which, under the influence of some unknown cause, enveloped a few centimètres of the intestine; the strangulation was incomplete because it allowed the animal to live till the day when the alimentary matter injested and accumulated above it destroyed, by incessant irritant action, one of the walls of the sac which contained it."

MALIGNANT ŒDEMA IN CATTLE.—Veterinary Surgeon Abbinger contributes the following to the *Wochenschr. für Thierheilkunde*:—"Although the bacillus of malignant œdema is very widespread, yet cases of disease produced by it come comparatively rarely under observation, but those which follow may be interesting. A client of mine noticed in one of his cows a swelling, about the size of a man's hand, in the region of the lower glands of the ear, on the 28th September. On the 29th, the swelling was four times its former size, and the animal refused its food. I split up the swelling, pierced the infiltrated connective tissue in every direction with a strong seton-needle, squeezed out the infiltrated matter as carefully as possible, and widened the passages so far that the secretion could escape, and I had the parts brushed out several times daily with a 1 per 1,000 solution of sublimate, which was afterwards replaced by a 5 per cent. solution of creolin. In addition, the animal was removed to an airy stable, and got luke-warm bran-drenches. She had quite recovered in ten days. A similar attack on another cow ran the same course. In this animal I found extensive œdema on the right external masticator muscle, and beside this, to the right of the fraenum of the tongue, I noticed an injury to the mucous membrane, infiltrated with jelly-like substance. On its being opened up, a quantity of stinking fluid was exposed. The wound was syringed with creolin, but, unfortunately, the owner tied a piece of old cloth on it, and next day the swelling had again considerably increased. The general health of the animal was likewise disturbed. Deep scarifications led to the formation of a fistula in the cheek. Cure took place within 14 days. Three months after the cow was again attacked by malignant œdema; there was complete loss of appetite and fever; temperature, 105° Fahr.; but again, after prompt operation, a cure was effected in ten days. This case controverts Chauveau's assumption that an attack of the disease produces immunity. I am rather of opinion that repeated infection weakens the power of resistance. In a third case the swelling had extended within two days from the throat to the middle of the neck and was as large as a loaf of bread; there was also

fever and a temperature of 105° Fahr. I opened up the swelling vigorously and exposed, as in the former case, a great quantity of evil-smelling fluid. A cure was effected in three weeks. In a fourth case the œdema was found, on the third day of the attack, to have extended from the throat to the point of the breast, and the general health of the animal was seriously affected. The swelling was opened up by me over its whole extent and treated with creolin, but next day the swelling had greatly increased and the animal died. A *post-mortem* was unfortunately impossible, but probably death was due to the fact that the whole of the œdematous fluid had not been removed, perhaps because I was afraid to cut too deeply in the neighbourhood of the great vessels running over the sternum. In cases like these, of malignant œdema, the professional man may easily make a mistake by supposing that they are cases of simple inflammatory œdema, and then he is startled by the grave termination. Let the practitioner be on his guard from the outset and watch for symptoms of the malignant form.

Infectious Œdematous Swelling of the Limbs.—Veterinary-Surgeon Rexilius, of the 10th Regiment of Prussian Dragoons, writing to the same journal says:—In a squadron of our regiment three horses were found on 24th July to have swollen legs, but otherwise seemed in good form. On the following day 30 other horses were found to be affected in the same way. Temperature, pulse, breathing, appetite and action were normal, but in some of the horses the conjunctivæ were reddened. The swelling was confined to the feet and extended as far as the hocks, which were hot and were doughy on pressure, apart from this there was nothing abnormal. On the third day other 16 horses were affected, whilst 22 of those formerly attacked had recovered. On the 27th and 28th July several new cases occurred, but there were none after that date, and on the 29th the swellings on all the affected animals had disappeared. The whole course of this curious affection was one of some five or six days, and it cannot, therefore, be described as a disease. It could not have been malanders, nor phlegmon, nor the œdematous swellings caused by long standing. I diagnosed it as a nettle-rash, the symptoms favouring such a conclusion. It was frequently noticed that first the limbs became swollen and then the pimples began to appear on the body. At the time of the outbreak of this epizootic affection a horse of the same squadron became ill of a severe nettle-rash over its whole body, which caused extreme depression, as in animals affected with staggers. All the symptoms seemed to me to point to an unusual form of nettle-rash in which the œdema was confined to the legs. I could not discover the cause; the fodder was perfect. Chemical examination of the water showed nothing wrong. Perhaps the trouble lay in the straw; it had been exposed to the sun all day, and as the heat was very great, it is possible that some dormant infective material had thereby been developed.

A German Fairy Tale. A new Cure for Lock-Jaw.—The following charming story is contributed to a German veterinary magazine, by Veterinary-Surgeon Harmsen; it forms a valuable addition to our knowledge on therapeutics. On the 19th of June a farmer was bringing home a mare which, with her foal, had been grazing in a meadow some eight miles away from the farm-house. The farmer drove along at a good pace, and the mare and foal trotted behind his gig, at first merrily enough, but gradually the mare became more and more straddle-legged and stiff, and when at length the farm-house was reached the poor animal when once she had come to a stand was scarcely able to stir from the spot. She was breathing heavily, and although she appeared to be hungry she could eat nothing. Then the farmer sent for Mr. Harmsen who at once saw that it was a severe case of trismus. The mare was lying on the green sward but she was not able to raise herself; her neck was stretched out stiff, the nictitating membranes were half-drawn

over the pupils, the tail was all twisted to the left side, and the poor beast was no longer able to swallow water; there was no doubt about the case. Mr. Harmsen had no great hopes of saving the mare but ordered a dose of chloral to be given to her by her owner. So the farmer set off to fetch the medicine, but as he jogged along he met another farmer and to him he told his troubles; this farmer was a wise-acre, and he said at once to his sorrowing friend that a horse suffering from lock-jaw could only be cured by a shot from a gun! "There is no other chance for the beast," said he. Now, farmer number one was anxious to go to see the opening of the Baltic Canal, he had very little trust in Mr. Harmsen's proposed treatment, and he had little hope of seeing his mare get better, and he thought he might at any rate give her a double chance and at the same time settle the matter speedily. So he bought the medicine and gave the mare a double dose of it per anum. Then he went to another farmer and asked him for the loan of his gun, loaded with a double charge. Farmer number three did not like the look of the thing, but could not very well refuse the loan of his gun to his neighbour, and so he took good care when loading his gun to load it with a double charge of powder only. Now comes the catastrophe. The farmer, owner of the mare, armed with his blunderbuss, goes to the stable, lays himself down on the head of the prostrate mare and fires—against the wall! There is a terrible recoil from the gun, and likewise from the mare. The farmer gets up with all haste and flies from the stable, but as he does so he takes a last look at the mare, and behold, there she is standing on her legs drinking water out of a bucket, and already pawing the stable floor! From that moment the animal was completely cured, and became the wonder of the whole neighbourhood, as our readers can well believe. Mr. Harmsen had been unaware up till that moment that the farmers of his district practised such "cures;" but a colleague told him he remembered having heard, when quite a youth, that the country-folks of his district used to "cure" horses attacked by lock-jaw by holding a thick board in front of their heads and giving a tremendous crack with a hammer on it!

THE SPAYING OF COWS: ITS PRACTICAL UTILITY.—We abridge the following from *La Revista Veterinaria*, a Spanish journal published in Buenos Aires:—We used to be of opinion that spaying of the cow was both useless and uneconomical, and we based our opinion on observations made whilst in Europe. We thought that the cost of the operation, the large percentage of losses consequent thereon, and the length of time required by the animals to regain condition and become fat for market, were not compensated by the improvement in the quality of the flesh and the prices obtained for the fat stock at market. The results achieved by our colleague, Senor Rucq, show that we were wrong in our estimates. Last year he spayed some ten thousand cows with extraordinary success, his average of deaths not exceeding two per cent. Our friend writes as follows: "If breeders wish to make the most of their herds, they must practise a wise selection, picking out not only good bulls, but likewise cows that are well-formed and of proper weight. All cows must be excluded for breeding purposes that are not well shaped, or are not of sufficient bulk or are too old; at present such animals do not fatten readily, and they fetch poor prices in the market. They ought to be set apart and spayed, because the flesh of a cow that has been thus treated is of better quality—tenderer and more delicate; and the sooner the operation is performed the better, because then the flesh becomes streaked with fat, and therefore juicier and pleasanter to the taste. It is likewise more digestible and more nourishing. When speying is performed on calves, the result is more flesh and more fat and a smaller quantity of bone." Our friend then goes into the question of milk production, and

draws conclusions favourable to the spaying of milch-cows intended afterwards for the butcher. We agree with him in thinking that the flesh of spayed cows—especially when the operation is performed early—is superior to the flesh of bullocks castrated at the same age, and fattened under the same conditions.

The following details are very curious and interesting. Senor Rucq lately spayed some sixty pregnant cows. These animals did not abort, as might have been feared, in consequence of the operation; the calves were developed in the normal way, and the mortality among them was only three per cent. The possibility of spaying, without danger to the offspring, a pregnant cow is of great importance to our farmers and breeders, as now they do not need to care, when setting aside animals for spaying, whether they are pregnant or not, which is often a very difficult matter to determine.

Senor Rucq disapproves entirely of spaying through the flank; he employs the vaginal operation, and says:—"This operation, if more difficult, avoids the dangers that accompany the operation through the flank. The animal suffers less, and, in fact, scarcely feels the operation. The losses are quite trifling. I have a special shackle, which costs very little, and with this, and the help of one or two labourers, I can perform the operation without needing to cast the animals." The cost of the operation per head is about a dollar on the average. When the weather is good our friend, with the help of his assistant, who always accompanies him, has accomplished the large number of 100 to 150 operations per day, and these are actual figures. We shall return to this subject, and explain the mode of operation, in a future number.

MILK IN A NON-PREGNANT MARE.—Veterinary Surgeon Dettmer of Spandau contributes the following to the *Berliner Thierärzt Wochenschrift*:—"On the 6th July last, I was asked to examine for pregnancy a black mare belonging to one of the tramway companies. On arriving at the station where the mare was stabled, I was informed that she had been some 13 months in possession of the company, but had during all that time never been covered. For the last five weeks or so, in spite of the fact that she had regularly performed her daily work in the cars, the mare had considerably increased in abdominal circumference. As she was in poor condition, it was determined to let her stand idle for a time 'until she foaled.' Her udder had also increased in size, but it was observed that this distention was greatest in the morning, and that in the course of the day, after the mare had moved about freely in a big yard, the swelling diminished a little. It was likewise noticed that whenever cold water was given to the mare, intermittent movements took place in the abdomen of the mare. I passed my hand carefully over the region of the flanks several times, but could find nothing resembling a fœtus; I then tried examination per rectum, but this also, to the great astonishment of those interested, gave likewise a negative result, that is to say, no trace of a fœtus could be found, and consequently there was no pregnancy.

"The question that will most naturally be asked is, how this mare, in spite of her hard daily work, came to increase so much in abdominal girth, and gave indications of milk production? As pregnancy was out of the question, we must assume that the mare was naturally disposed to be big-bellied, and secondly, that some unknown irritation, proceeding from the spinal marrow, had worked reflexly through the nervous spermaticus externus on the udder, and so brought about the production of milk. The intermittent abdominal movements following on the absorption of cold water by the mare are to be explained as severe intestinal contractions produced reflexly by the water."

Obituary.

THE LATE MR. GEORGE COWE, BALHOUSIE.—The death occurred recently, at Balhousie, Forfarshire, of Mr. George Cowe, after a protracted illness. Deceased was a native of Sprott, Haddington, and when quite a young man he was appointed land-steward of the Panmure Estates, belonging to the Earl of Dalhousie. During his long connection with the estates, he served under four lairds. Mr. Cowe took a great interest in agriculture, and in addition to holding the farm of Balhousie, he managed the home farm of Mains of Panmure. He was a director of the Highland and Agricultural Society, and also of the Angus Agricultural Association, and was regarded as one of the best authorities on sheep breeding in the county. The veterinary profession in Scotland has lost a great friend by his death. He took much interest in the science, and was a warm advocate of its great utility to stock-owners, and of the benefits the country had reaped from the work of veterinary surgeons. Mr. Cowe was a member of the Scottish Metropolitan Veterinary Medical Society.

McCouseley, S. M., Campbletown, Argyleshire, July, 1884.
Stanley, Thos., Edmonton, Middlesex, May, 1853.
Kenny, John, Crown Street, Liverpool, April, 1870.
Buckingham, John, Harleston, Norfolk, April, 1831.

Notes and News.

THE *Times* publishes a small table of figures which gives us reason to hope that the Board of Agriculture is, after all, meeting with a certain measure of success in its endeavours to stamp out swine fever. As everyone knows, the disease has caused great destruction among many herds, and it is very difficult to suppress it when once it makes its appearance in a district. The figures for 1894, and also those of the present year, show that the number of outbreaks was at a *minimum* at the beginning of the year, and rose to a *maximum* in July and August, and then they began to decline again. Last year the total number of outbreaks for May, June, July, and August was 2,343, whereas in 1895 there is a decrease on those figures of 341. There can be no question of the significance of those numbers, and it is to be hoped, now that something has really been accomplished in arresting swine fever, that pig-keepers will be induced to exercise the utmost care in the housing and feeding of their animals. As the *Times* remarks, the science of bacteriology has not yet found its way into the pig-trough, and there is still a wide lack of appreciation of the fact that the pig is naturally a clean animal. Let all interested in the pig business be careful about the housing and feeding of their stock, and they will materially assist the authorities in stamping out swine fever.

CARBOLIC ACID FOR CATTLE-ABORTION.—Considerable interest is being taken in the diary circles of Scotland at present in regard to the prevention of abortion in cattle by the administration of carbolic acid. The remedy has been tried by herdsmen in Ayrshire and Dumfriesshire, and has been wonderfully successful. The dose to begin with is from 30 minims to 1 dr., well mixed with the cow's food, and it may be increased gradually, and with safety, to ½ oz. every other day. The acid must be thoroughly well mixed with the food, and so far no observation has been made in regard to the effect of the acid upon the milk-secretion. The same treatment has been tried in Germany, but there the phenol is administered subcutaneously—viz., 5 c.c. of a 2 per-cent. solution.

THE *Lancet* says that the "services which electricity can perform in medicine and surgery, are both numerous and varied," which seems to be a bit of a pleonasm; but our contemporary proceeds with the remarks that "During the past ten years, the impetus given to the study of electricity by its commercial

applications, has created fresh interest in medical electricity, and there has been much improvement in the apparatus used, particularly in those details of construction which simplify the management of medical batteries, and in the introduction of galvanometers for accurate measurement. Fresh methods of treatment have also been proposed, some of which are likely to prove of real value. On the Continent, and in the United States, electro-therapeutics, as some of its votaries love to call it, is making progress. In France, there are two monthly periodicals devoted exclusively to medical electricity, and in America, the Electro-Therapeutic Association is busily attacking the question of apparatus in order to obtain a series of standard instruments and accessories for the use of its members. England, unfortunately, has as yet hardly begun to treat medical electricity seriously, although the electrical departments at some of the metropolitan hospitals are doing excellent work." It is satisfactory to learn so much on distinguished authority; but students of electricity will venture to doubt whether much more can be done with that in the cure of disease than can be effected by the administration of drugs. *Quantum valeat.*

Correspondence.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—Some few weeks ago I had serious trouble with the pit horses of a large colliery near here, through, in my opinion, their working in impure air. We lost several, but after altering the condition under which they worked we have had no further trouble. The manager of one of the collieries called my attention to a report of a paper in the *Colliery Guardian* on Lathyrus poisoning, the symptoms of which he thought were similar to the cases we had. On reading the report I found a similarity, so wrote Prof. Williams, describing briefly my cases. He very kindly at once replied, and thinking it might be of interest to some of your readers enclose you report of paper, my letter, and Prof. Williams's reply.—Yours truly,

CHAS. E. CHALLINOR.

"LATHYRUS POISONING."

Colliery Guardian,
Oct. 11th, '95.

MR. F. G. MEACHAM read a paper on Lathyrus Poisoning amongst the horses at Hamstead Colliery. He said that some time ago, owing to the high price of horses' feed, they decided to use peas in place of oats or beans, and this they continued for twelve months without any ill effects.

Early in November last, however, it was noticed that some of the horses seemed to be getting thick in their wind, and after running a few journeys they would pant and stretch out their necks to gain breath. The attention of the veterinary surgeon was directed to them, but he could offer no explanation. The horses became rapidly worse, and towards the middle of the month, one died, six others were badly affected, and three died four days afterwards. When the horses died, a sample of the food was sent to Professor Williams, New Veterinary College, Edinburgh, and he wrote that he detected the poisonous pea or vetch lathyrus sativus amongst the food.

In all, twelve horses died, and on others that had eaten the poisonous vetch, and which showed symptoms of poisoning, the operation of tracheotomy was performed; this gave them relief. But though they recovered, they were permanently injured. The pea came from various places, and was of a variety of colours. As with men, so with horses: the lathyrus was a cumula-

tive poison, the symptoms of poison showing themselves the sooner the greater the proportion of seeds in the horses' food. The Great Western Railway Company had lost twenty-four horses from the same cause, and there were many losses by other companies.

HIGH BANK, PENDLEBURY,
Oct. 17th, 1895.

DEAR SIR,—I have had my attention called to a report of a paper, read by Mr. Meacham, on lathyrus poisoning, and am much interested, as for the last two or three years I have had similar trouble with the pit ponies, or rather horses (some being between 15 and 16 hands) of a large colliery firm, but have attributed it to impure air, and not in any way connected with diet, as the animals working on the surface (over 200) were fed precisely the same, and have had excellent health. In my cases, the animals would feed all right, turn out to their work, hauling waggons, and after a short time begin to breathe hurriedly, and if not stopped working, and brought into good air, would stagger, fall, and, as in several cases, die almost immediately, in my opinion, from asphyia or oxygen starvation. All the animals affected were working in impure or return air; those fed on the same food, working in the intake or fresh air, remaining all right.

The diet consisted of oats, beans, maize, and chopped hay. I may also mention that the cases occur at the end of summer, or when the heat is greatest. In the case reported, will you kindly say if there were any horses above-ground fed on the same food, and if they were affected or not. Apologising for troubling you, believe me, with kind regards,

Yours truly,

Prof. Williams. CHAS. E. CHALLINOR.

NEW VETERINARY COLLEGE,
EDINBURGH.

DEAR SIR: The horses referred to in the paragraph were both above and below ground, and in all the other cases I have had to do with seven or eight of the horses were above ground.

I should say that your ponies were suffocated. The symptoms from lathyrus are not only rapid breathing, but intense roaring, and they remain roarers. You do not say whether the horses were fed on lathyrus or not, but I conclude that they had no other food than oats, beans, maize, bran, and chopped hay.—Yours faithfully, W. WILLIAMS.

6, THE CRESCENT, TAUNTON.
October 21st, 1895.

To the Editor of the VETERINARY JOURNAL.

DEAR SIR,—It is with regret I ask you to notice in your obituary of members the decease of my late brother, Veterinary-Surgeon Joseph Gibbs, retired pay, formerly of the Royal Horse Artillery, which occurred at Brighton on September 5th from myelitis following "sunstroke," received during service in tropical climes, aged 48 years.

Deceased graduated in 1869 after seeing very extensive practice with his father, then the oldest qualified veterinary surgeon in the West of England and also with Mr. Wheatley, of Reading, and Mr. Broad, of Bath, and whilst serving in Poona the largest horse station in India, for two years, he received from commanding officer and from the Governor of Bombay the highest enconiums for his skill and assiduity to his duties. I often heard him speak of the great kindness and the knowledge he gained from yourself during his two years' service in Edinburgh, and for which he had the most grateful recollections. From the first inception and until his death he was a constant subscriber to your journal and you will, I hope, pardon me if I take this oppor-

tunity of wishing you every success in its continued prosperity.—Believe me, with great respect, your obedient servant, ROBT. GIBBS, M.R.C.V.S.

[Well do we remember our friend Mr. Gibbs, and deeply do we regret his loss. He was one of the most warm-hearted men we ever had the good fortune to know. ED. *Veterinary Journal.*]

Reviews.

VETERINARY PHYSIOLOGY. BY VETERINARY-CAPTAIN F. SMITH, F.R.C.V.S., A.V.D., Examiner to the Royal College of Veterinary Surgeons. Second edition (re-written). Baillière, Tindall & Cox, London.

For some considerable time past, the tendency in scientific instruction, and, of course, in text-book compilation, has been to strip the subject of all superfluous loading of details, and to show it as founded upon certain "broad facts."

To this task our author has set himself, and pointed the student and practitioner to various other books for detailed information. Captain Smith's extensive acquaintance with his subject and his untiring capacity for detail have, however, carried him so far beyond his modest advertisement to the above effect in his preface, as to make his treatise a mighty mass of detail, backed up by figures to second decimal places in numerous columns, while the "broad facts" have suffered so great a broadening or extension, we may say an extenuation, from the weight of so learned a superstructure, that their depth and solidity has been somewhat endangered. A keen eye and careful reading will, however, find them "all there," except where they have, as by too many previous writers on this subject, been drawn from the two reprobates, man and the dog, a duality considered beyond the pale of veterinary classics.

As in the former case, however, our author has disclaimed in his preface what he afterwards introduces, for do we not notice the following references to one, at least, of the unworthy pair, at p. 57 where blood-pressure is under discussion, at p. 125 where salivary secretion is treated of, at p. 175 where the nerves of the alimentary canal are explained, at p. 214 where absorption is the theme, and at p. 375 where the motor areas are in evidence, etc., not to speak of the chapters on the senses where poor humanity is under contribution?

Many eminent human physiologists figure also in his table of thanksgivings, and no doubt some matter from their works serves to pack out the purely horse physiology which forms the true backbone of the book. In our ignorant inanity, we had made ourselves believe that perhaps Captain Smith might have kept that backbone in a skeletal state, and reserved it for some pages in an appendix, and so saved much trouble both in the weaving up and the unravelling, but we must not encourage slovenly, and short-road-seeking habits in readers, who are presumed to be idle students in need of mental exercise.

In this light, perhaps, Captain Smith has ignored the usage in all previous books of this nature, and avoided the presence of histology—he tells us so, but kindly relents afterwards and gives a few nice figures from mixed sources (uncomplicated, however, by explanation beyond names). Some stupid people might, as from experience, have been able to make more of blood if a few scratches had been figured. Text-books, have become of late too much of picture books, and hence we learn here about the mechanical complication of such things as cardiographs, sphygmographs, ophthalmoscopes, etc., etc., in six or seven lines of letterpress alone. Talking of the blood, we had thought the sodium salts were chloride carbonates, etc., and not bicarbonates in any quantity at least. In a book our author speaks of the latter salt is named, and we must blame the source and not the compiler after all.

Again, as to tables of analyses of which our author evidently is very fond

we rejoice with him in finding some old friends of the days *ehen*, before our hair became grey. Hoppe-Sezler has certainly served well his day and generation, and the printer-man should by no means have made his figures incomparable with those quoted by others, from the same source.

We once thought we knew the "cardiac cycle," and could tip off all about the periods of "Pause" and "Repose." Now Captain Smith tries unfairly, we think, to muddle us by mixing up both those terms in the one, *Pause*.

Chauveau is twitted with giving 60 per m. as the pulse, while we beg to point to his figure from M'Kendrick at p. 35 as giving 50. Good old Chauveau's stupid people should compare pp. 31 and 32, about Captain Smith's Pause, as also with the figures at p. 35.

Somehow, we seem to miss our familiar friend, the mucus cell, as an element of saliva, and have a difficulty in seeing how the absence of ptyalin can be got over; but that is mere detail. In an elementary book, the stomach certainly gets fair room in 37 pages, and locomotion in 29. Farmers and others interested in hay and oats, will be glad to see long tables of analysis given accurately, no doubt, to the second place of decimals! Let students also rejoice. After all, we think it hardly fair that poor old Colin should be made responsible for so much, and leave "not a line" outside the cover to his honour. A few good pictures in telling black appear about the nervous system, but, perhaps, the general artistic effect, or the degeneration of our eye—one or both, may account for our failing to see new views of "paths" in the spinal cord.

Possibly, also, our memory is at fault when we fail to remember how the chromatic aberration of the eye is prevented by a difference in the *refractive* powers of the media (see p. 419). Possibly, also, our acquaintance with the hard facts of practice leads us to be rather uncourteous in denying our author's statements about sweat almost *in toto*. As a work so complete in itself, we feel quite unable to review its many technological and widespread disquisitions; but we feel sure that it will be carefully read by everyone who seriously intends to master the difficulties of entering our now many-sided profession. More need not be said. For other information, Physiological, &c., &c., the student is shown where to go.

THE ART OF HORSE SHOEING: A MANUAL FOR FARRIERS. BY WILLIAM HUNTING, F.R.C.V.S., Ex-President of the Royal College of Veterinary Surgeons.

The preface informs us that this work was written for three classes of readers: for horse owners, who may interest themselves in the subject, for farriers who are open to conviction, and for veterinary students, who have to be examined. The author has also aimed at imparting his ideas on the subject in simple and clear language, and he has done so in a skilful and admirable way. No contribution to veterinary literature on this subject has as yet appeared, that we would more willingly place in the hands of our farriers and our students, for their guidance and instruction.

EDITORIAL NOTE.

"A Reader" is referred to Messrs. Maw, Son, and Thompson, Aldersgate Street, London, E.C., who most probably will be able to furnish him with glass eyes and the desired information.

Communications, Books, Journals, etc., Received.

Recueil de Médecine Vétérinaire (Alfort); La Presse Vétérinaire (Paris); L'Echo Vétérinaire (Liége); Annales de Médecine Vétérinaire (Brussels); Berliner Thierärztliche Wochenschrift; La Revista Veterinaria (Buenos Aires).